

local defense but, more importantly, as an aid to defense against expeditions headed eastward and as a stopping stone for landplane support of expeditions headed westward.

(b) *Kure Island Development.* This will be of very great value to patrol planes in the Hawaiian area. It is the best location for operations of these planes and no other place is suitable for planned patrol plane expansion in this area. Inclusion of facilities for Navy patrol squadrons in this development should be undertaken immediately.

(c) *Development of the N.A.S. Barber's Point.* This approved development is very urgently needed. There is a strong tendency to turn down many aviation shore facility items in this area on the basis that they will be available when Barber's Point construction is finished. This makes it more than ever mandatory to expedite the work.

My kindest regards and best wishes always.

Most sincerely yours,

H. R. KIMMEL.

Admiral H. R. STARK, U. S. NAVY.

Chief of Naval Operations,

Navy Department, Washington, D. C.

EXHIBIT No 35

SECRET

WRS/mjf

NAVY DEPARTMENT,
OFFICE OF THE CHIEF OF NAVAL OPERATIONS,
WASHINGTON, August 22, 1941.

DEAR KIMMEL: When I left I asked Ingersoll to reply to your letter. The enclosed draft I have just inherited. In order to get it off to you in this next clipper, I am sending it along as is, except for some pencil notes (both red and black) which I have just added.

I know you want results, not excuses. So do I. I am doing everything from pleading to cussing with all the in-between variations and hope the picture presented is not too unsatisfactory.

I realize that in addition to this letter I have two more of yours to answer which I shall try to get at the first of the week, if I can clear up urgent, current material now on my desk. Still wading into the pile I found on my return.

There is much doing in the Atlantic and in the formative stage. Thank God we should have things in full swing before long and with plans fairly complete. [Handwritten comment: It has changed so many times—but now I think we at last have something fairly definite may-be.]

To your own situation I am giving every though I know how. You may rest assured that just as soon as I get anything of definite interest, I shall fire it along.

My best to your fine District Mate, (Admiral Bloch) and to all with you, and as always—

Best of luck—wish you were close by

Sincerely,

BETTY.

Admiral HUSBAND E. KIMMEL, U. S. N.

USS PENNSYLVANIA, Flagship

Pearl Harbor, T. H.

[1]

DRAFT

AUGUST 19, 1941.

DEAR MUSTAPHA: Your letter of 26 July 1941 arrived in the Navy Department on the eve of my departure for distant parts. It was fine to hear from you, and I appreciate your laying before me so frankly the thoughts that are going through your mind.

My reply to you has been delayed for two reasons:

1. There was insufficient time between the receipt of your letter and my departure to prepare a reply, and

2. So many of the points you raised I had hoped to have the answers upon my return to the Navy Department.

I can readily understand your wish to be kept informed as to the Department's policies and decisions and the changes thereto which must necessarily be made to meet the changes in the international situation. This, we are trying to do, and if you do not get as much information as you think you should get, the answer probably is that the particular situation which is uppermost in your mind has just not jelled sufficiently for us to give you anything authoritative.

So far as the Russian situation is concerned, and the degree of cooperation that will prevail between that country and ourselves if and when we become active participants in the war, little can be said at the moment. Some slight aid is being sent to Russia. Five bombers and 200 P-40's have already been allocated. The bombers will be flown to Russia via Iceland and the British are supplying bottoms for the fighters and naval escorts for same. On 11 August 1941, the Russian Mission, headed by Ambassador Oumansky, and assisted by a Lieutenant General of their Army and a Captain of their Navy, was received by Secretary Knox. The Ambassador stated that his country had pressing need for all manner of military supplies, planes—and anti-aircraft guns in particular. He announced that "quantities" of bombs, ammunition, and machine tools were needed. The Secretary explained to the Mission that the material they needed was largely of Army origin, and that there [2] were no reserve stocks in the country from which to draw. The Secretary summarized his remarks by saying that, since the President had made the decision to give aid to Russia, the Navy could be counted upon to cooperate to the utmost.

You are correct in stating that "the new situation opens up possibilities for us which should be fully explored." This will be done. The conversations which took place at sea between the Chiefs of Staff on 11-12 August somewhat helped to crystallize thought on the matter. Specifically, no decision was ~~reached~~ *announced* as to whether or not England would declare war on Japan if the Japanese attack the Maritime Provinces. Neither can I forecast what our action would be if England declared war on Japan as a result of the latter's attack on the provinces in question. [Handwritten comment: I have done my utmost to get a decision—it can't be had now either here or in London. I make no forecast.]

Of course, Japanese action against the Maritime provinces remains a decided possibility. The results of such aggressive action, of course, lies in the realm of conjecture. However, it is my own thought that if Japan gets embroiled with Russia over the Maritime provinces, such action could hardly react other than to somewhat relieve the pressure now being exerted by Japan to the southward. ~~In such an event, I think there would be many signs of relief.~~

If England declares war on Japan, but we do not, I very much suppose that we would follow a course of action similar to the one we are now pursuing in the Atlantic as a neutral. It is, of course, conceivable that we would lay down a Western Hemisphere Defense plan with reference to the Pacific. [Handwritten comment: I could not get no plan from the British—They did not have one—ABC and Rainbow V still prevail.]

We are in complete agreement about developing Guam and bolstering the defenses of the Philippines. The Army is sending everything it can out there. As you know, we are sending Tommy some PTs. More aid would be sent him if it were possible to do so. I fear, however, that it is pretty late to start on Guam anything more than we already have in hand. We will make all the progress we can, remembering that "Dollars Cannot Buy Yesterday."

[3] In discussing the priorities in connection with preparation for a Pacific War, for your convenience, I shall quote the paragraphs from your letter *in order and follow each with shall then comment on it:*

Paragraph 2 (a) of your letter. Transports and Light Destroyer Transports. During the Commander-in-Chief's visit to Washington, all the transports, including the light destroyer transports, were transferred to the Atlantic. The necessity for this is recognized. Nevertheless, we still need transports in the Pacific and the need is even greater now (in point of view of time particularly) because most of our trained marines went with the transports and we are faced with an immediate training problem in addition to a possible war situation. The Department has initiated action to complete the HARRIS and ZEILIN and to acquire and convert four more transports for the Pacific, but, so far as is known, has done nothing about replacing the light destroyer transports (APD's). These vessels were originally conceived and developed for a Pacific campaign. They are especially suitable for use in attacks on atolls and may be the only means of readily attacking those positions. While by no means discounting their usefulness in the Atlantic, the need for them in the Pacific is paramount. If at all possible, they should be returned to this ocean *at once*. If this cannot be done, and only if it

cannot be done, additional destroyers must be converted as soon as possible. Work on the large transports must also be expedited and completion dates anticipated if possible.

Comment. We all recognize that the APD's were developed with a Pacific campaign in mind. We withdrew them to the Atlantic with great reluctance, and you can count on their being returned to the Pacific at the earliest opportunity. Likewise, work is being pushed on the HARRIS and ZEILIN. I must confess that progress on those ships has not been wholly satisfactory.

[Handwritten note at bottom of page:] I more than confess—I admit it. The whole thing has been a headache. It was these old crocks or nothing. Slow as they have been, I am glad I took 'em over. At least we will have 2 we could not get now. Every AP has been a struggle. I am keeping the APD's open—don't give up hope—yet.)

[1]

ROUGH DRAFT FOR ADMIRAL KIMMEL'S LETTER

AUGUST 16, 1941

Paragraph 2 (b) of your letter—Marine Equipment.—The Sixth Defense Battalion does not now have its full equipment, particularly AA guns and .30 and .50 caliber machine guns. The remaining units of the Second Marine Division were stripped of much of their equipment to fit out the reenforced regiment that went East. There is practically no marine ammunition now on the West Coast. It is practically certain that these units will fight before the Army will and their needs must be given priority. We can't fight an amphibious war in the Pacific without ammunition for the marines.

We are going ahead with the preparation of a camp in Oahu for five thousand marines. When they come, they should be fully equipped for amphibious warfare. The transports etc., should be ready at the same time. An estimate of when the needed equipment and men will be available would help us in our planning.

Comment.—In reference to the 3'' AA guns, and the .30 caliber machine guns of the Sixth Defense Battalion, reports received at Headquarters, Marine Corps indicate that that organization has had all of its initial allowances in those weapons since 7 July 1941; that is, 12—3'' AA guns, and 30—.30 caliber machine guns. The shortage in .50 caliber AA machine guns should be remedied by September, 1941.

An outline of the present situation in reference to Marine equipment and related matters, as well as an estimate as to when this equipment will be available is contained in CNO Serial 083312 which was forwarded to the Commander-in-Chief, U. S. Pacific Fleet about 25 July 1941. It is believed that this presents as complete a picture as is possible at this time. The bulk of the shortages in equipment and ammunition lies in items which must be procured from the Army. Existing stocks in the United States are at present much too low to meet the requirements of all Services. Proportionate allocations of new equipment for all Services have been made by the Joint Board, and the Navy and Marine Corps may expect their proportion to be delivered from the manufacturers more steadily and consistently in the future than heretofore.

The general shortages in ammunition for the Marine Forces are likely to exist for some time, however, mainly due to the fact that quantity production will not obtain until late in the present calendar year. In the event of an acute emergency, it is believed that sufficient ammunition to fill immediate requirements of the Second Division [2] as it exists today may be specially obtained from the Army. We have milked the Army pretty dry now.

The present outlook indicates that sufficient personnel will be available by 1 October 1941, to form for expeditionary duty a reinforced regiment from the Second Marine Division, and also leave within the Division a nucleus for training of its remaining units. It is hoped that the Second Division can be completed in personnel by January, 1942.

Paragraph 2 (c) of your letter—Ammunition Facilities. The condition of ammunition handling and stowage facilities ashore are in general satisfactory at the present time. Stowage facilities have been completed, are in the process of construction, or are about to be started to handle assignments of service reserves of gun ammunition, bombs, mines, and torpedoes. This includes igloos already completed and others now under construction at Westloch and at Lualualei.

New construction authorized and about to be undertaken includes four powder magazines and four shell houses at Lualualei, and barracaded stowage for five

mines, two new mine anchor buildings and a new mine assembly building at Westloch.

New construction needed to complete stowage and handling facilities includes extension of Westloch dock to a maximum of two thousand feet and the construction of four powder magazines and two shell houses at Westloch to accommodate target practice ammunition which cannot be stowed in vessels of the Fleet. This latter construction has been recommended to the Commandant of the Fourteenth Naval District in recent correspondence and we have no word yet on what action he has taken.

Comment. The Bureau of Ordnance has had all ammunition storage items requested by the Commander-in-Chief provided, except:

(a) Extension of ammunition pier at West Loch. Funds have been obtained to extend the ammunition pier from 600 feet to 1500 feet. Since no authorization will be required to extend the pier from 1500 feet to 2000 feet, the Bureau of Ordnance expects to divert the necessary funds temporarily from other projects for this extension, to avoid delay. The funds required are \$250,000, which will eventually be obtained from Congress to repay the project robbed.

(b) No funds are available for the construction of four powder magazines and two shell houses at West Loch. No authorization has been obtained for the construction of these magazines. The Bureau of Ordnance will have these magazines included in the next authorization [hand written comment: supplementary] bill to be presented to Congress and will have the necessary funds requested for their construction. The funds required are estimates as at \$210,000.

[3] The following was supplied by the Chief of the Bureau of Yards and Docks:

"The construction of four powder magazines and two shell houses at Westloch is a new item not previously presented to the Department and we are awaiting word from the Commandant as to his recommendation. The construction of these buildings will necessitate the purchase of additional land."

Paragraph 2 (d) of your letter. The importance of building up Navy Yard, Pearl Harbor to the point contemplated by the Greenslade Board. For the present Navy Yard, Pearl Harbor should be regarded primarily as a "restricted availability" yard. Overhaul of ships here should not include battleships and cruisers or other ships for extensive regular overhauls. The facilities of the yard should be confined to emergency and low priority overhaul, regardless of overhead costs.

Comment.—Building up Navy Yard, Pearl Harbor.—The Bureau of Ships shortly expects an appropriation from Congress (Supplemental 1942) to take care of, among other things, all navy yard facilities necessary to repair and maintain the 1946 feet in war. Pearl Harbor is funded in the amount of \$20,000,000 for this purpose, which includes the cost of an additional major battleship dock. This dock together with the other facilities which will be accomplished with the money, will bring the yard up to the point contemplated by the Greenslade Board Report. The time involved in expanding Pearl Harbor to the extent indicated above is as follows:

12 months for 50% of the facilities.

18 months for the remainder of the facilities.

22 to 24 months for the dry dock.

Note:—The Commander in Chief, Pacific Fleet, and Fleet Maintenance—Operations control making ships available for overhauls and set the priority for work at the Navy Yard Pearl Harbor.

The Bureau of Ships has increased the special stocks at this Yard of spare propellers and shafting—it has under procurement, additional stock in tubing for boilers, condensers, superheaters and heat transfer apparatus; additional stock of generators and ice machines.

[4] The Shore Establishments Division intends to augment the working force as the capacity and work load are increased.

Relative to the repair facilities at the Pearl Harbor Yard, the Bureau of Yards and Docks has issued instructions to expedite all of this work to the greatest practicable extent.

The recommendation to confine the activities of the Navy Yard, Pearl Harbor to emergency and low priority overhauls can be accomplished by transferring regular overhauls of Battleships, Carriers, Cruisers, and Destroyers to West Coast yards but this recommendation is not concurred in for the following reasons:

(1) The Greenslade Board report, approved by the Secretary of the Navy on

May 14, 1941, recommended that the Pearl Harbor Navy Yard be built up to take care of 20 per cent of the fleet in the Pacific when the two-ocean navy was in existence and that the yard be capable of handling "full overhauls and damage" with simultaneous drydocking facilities for 2 Battleships, 1 CB, 1 CV, 1 CA, 1 twin DL and a DL marine railway. Pertinent to this is a letter from the Assistant Secretary of the Navy (Shore Establishments Division) dated June 26, 1941 in regard to building up the facilities at Pearl Harbor and noting that no Battleships or Carriers were scheduled for overhaul at Pearl Harbor in 1943. The third paragraph of this letter is quoted herewith:

"It is believed it is necessary that capital ships be overhauled at Pearl Harbor if that Yard is expected to perform the war task that has been assigned. It is, therefore, recommended that in the next revision of the availability schedule, a start be made toward an equitable diversion of the overhaul of Battleships and Carriers from Puget Sound to Pearl Harbor."

The Director, Fleet Maintenance Division: It is believed that only by actual overhaul and repair of Capital Ships, Destroyers, and Cruisers can the Pearl Harbor organization be trained and made capable of repairing [5] these ships in an emergency, together with development of necessary facilities.

(2) Repairs to British Naval vessels, particularly the larger types of ships, is absorbing a large percentage of the repair facilities of continental U. S. yards and it is expected that the demands will increase. East Coast yards are being used primarily for this work but it has been found necessary—due to full schedules of these yards—to send some British ships to Puget Sound and Mare Island.

If these latter yards are fully scheduled with our own ships (as can be expected if all Battleship, Carrier, Cruiser, and Destroyer overhauls are transferred to them from Pearl Harbor) it is problematical whether British ships can be repaired and overhauled at the rate that this is now being undertaken.

The foregoing comment by Fleet Maintenance is substantially in accord with your letter L9-5 (50) over L9-3 Serial 01176 of 1 August 1941.

Paragraph 2 (c) of your letter.—Provide more and more personnel to the Fleet for training. The personnel situation has been presented to the Bureau of Navigation and that Bureau is thoroughly familiar with our requirements. We cannot provide experienced personnel for new construction next year unless we obtain recruits and train them intensively at once. I realize that recruiting has fallen off and that the Department is doing all it can but we are losing trained men faster than we are getting new recruits. As I stated in a recent letter we could use 20,000 more men in the Pacific Fleet right now.

[Handwritten comment:] I know it—God knows, I wish I could send 'em.

Comment. The present rate of recruiting is about 9,300 men a month. According to the best estimates, about 12,000 recruits are required in order to meet the requirements of the service on June 30, 1942 based on present allowances. (This estimate is subject to variables such as changes in dates of commissioning ships and stations.) Therefore the Navy will lack approximately 32,000 men necessary for Navy requirements on June 30, 1942. It is estimated that this will be enough men to [6] fill complements and allowances on that date to an average of about 92%. The Fleets are now filled to about 94% of complements. This percentage will drop due to large recent increases in aviation squadron allowances. It is estimated that Navigation can replace losses in the Fleets with recruits to maintain them at about the same percentage of men aboard to complements as at present. Should be 100+.

The recent large withdrawals from the Fleets have been due to the necessity of supplying the crews for the large number of auxiliary vessels recently acquired and for the assembly of men for Advanced Destroyer, Submarine and Aviation Bases. These demands were superimposed upon the demands for the regular building and usual purchasing program.

The above estimates are based on a monthly rate of recruiting of 9,300. Recruiting is now on the increase and additional men over the 9,300 monthly will be furnished to the Fleets.

[Handwritten comment:] We are spending \$1,000,000 in advertising—hope to speed it up.

Paragraph 2 (f) of your letter.—Need for a hospital ship in the Pacific Fleet and for completion of new hospital at Pearl Harbor.

Comment. It is contemplated assigning the SOLACE (AH5), Ex-IRIQUOIS, to the Pacific Fleet upon readiness for service, which should be in the latter part of August, 1941. Further, it is contemplated transporting Mobile Base Hospital No. 2 from New York to Oahu in the U. S. S. PROCYON (AK19) departing New

York early in October; she is a 15-knot ship and will call at San Diego to debark some personnel and stores there en route.

So far as the new hospital is concerned, the contract for this has been let and presumably the work is underway.

Paragraph 2 (g) of your letter. Urgency for small craft in the Fourteenth Naval District for patrol purposes, to relieve the load on our limited number of destroyers.

Comment. The project is now underway to send twelve PT's to the 14th Naval District as soon as the boats can be prepared and transportation provided. This shipment will follow the six MTB's going to the 16th Naval District via the GUADALUPE scheduled to depart from New York Yard about 15 August or as soon thereafter as practicable.

[Handwritten note at bottom of page:] Wish I had more. They will be coming. I know Xmas is too, but we are doing the best we can—and I am kicking all the time.

[6a] Paragraph 2 (h) of your letter. The need for acquiring advanced base material and assembling it at Mare Island.

Comment. The project of assembling advance Base Material has been raised to an A-1-a [handwritten note: our highest priority] priority, and the assembling of this material is going ahead satisfactorily.

[7] Paragraph 2 (i) of your letter. Correspondence has gone forward urging that all available light craft in the Pacific be fitted with depth charges, listening gear, etc. This is important.

Comment. In this connection, I quote verbatim the remarks of the Fleet Maintenance Division in order that you may have the entire picture:

The status of placing depth charges and under-water sound equipment on light craft is as follows (taken up by classes):

DMs and DMSs—These vessels have depth charges and echo-ranging equipment authorized; some have the equipment installed and those ships that have not yet received their echo-ranging equipment will get Model QC Series commencing in September 1941. [Handwritten note: Too slow I know—but I have been doing my d-st.]

AVDs—Stability conditions on these ships are not good and the addition of depth charges, racks, or Y-guns, and echo-ranging equipment will necessitate compensating weight removal. It is understood that the desired equipment can be installed providing the towing reel on the fan tail is permanently removed. A lightweight echo-ranging and listening gear equipment, Model WEA, has been developed which weighs about 1300 pounds, with deliveries commencing in October 1941.

The following are the requirements for the WEA equipment:

- (a) Power supply 115 volts D. C.
- (b) Head room required for hoist-train equipment about 70 inches.
- (c) At least 24 inches between frames of ships to accommodate pedestal.
- (d) Remote control of train by means of cables and sheaves, using hand wheel at operating position.

The above equipment is suitable for any installation in AMs (Bird Class) and in most converted yachts. Additionally, this equipment can be installed in any other types of ships having adequate space and power supply.

A lightweight listening equipment (Model JK-9), about 1300 pounds, has been developed and contract awarded for 230 sets; delivery [8] commences in August 1941 at a rate of 10 each week. The following are the requirements for installation of the JK-9 equipment:

- (a) Power supply 115 volts D. C. or 24 volts D. C. (Two types of motor generators available, producing 115 volts, A. C.). Overall dimensions of motor generator set $29\frac{1}{2} \times 13\frac{1}{2} \times 11\frac{3}{4}$ inches.
- (b) Maximum head room required for hoist-train mechanism about 96 inches.
- (c) Only limitation or frame spacing is that it pass the 4-inch projector shaft.
- (d) No remote control—hand hoist and train directly connected to projector shaft.

This equipment is for listening only (no echo-ranging feature) and is suitable for use in any type of ship having adequate space and power supply. Space

allotted to the equipment must provide for the hoist-train equipment (overall dimensions 7'-9" x 26½" x 20"), receiver (overall dimensions 19" x 12" x 15½") and sufficient space for the operator.

APDs—The APDs have the depth charge tracks installed and now carry 24—300 pound depth charges. The stability conditions of these ships is so unsatisfactory that they will require 50 tons of fixed ballast. The installation of the WEA echo-ranging equipment, described under AVDs, above, can be accommodated in these ships.

AMs and AVPs—The question of installing depth charge and echo-ranging and (or) listening equipment on these types has been referred to the Bureau of Ships for study and recommendation as to the practicability of accomplishment.

It should be pointed out that draft and stability conditions of these vessels is critical and instructions are about to be issued limiting their displacements. Informal information from the Bureau of Ships indicates that compensatory weight reduction must be made on practically a pound-for-pound basis in order to install the desired equipment. The installation of echo-ranging, or listening equipment is dependent upon the delivery schedule as outlined above under AVDs.

[9] It is to be noted that the lightest depth charge rack now developed (carrying six 300 pound depth charges) weighs about 1500 pounds. As each depth charge with its equipment weighs 420 pounds, the total weight of depth charges and track to be compensated for will be about 4000 pounds. The weight of the lightest underwater sound equipment is about 1300 pounds as explained above under AVDs.

PEs, PCs, PYs, PYCs, and YPs. All these vessels have depth charges, the number depending upon the size of the vessels. Some of these vessels are equipped with both depth charge racks and Y-guns.

Echo-ranging and (or) listening equipment has been authorized and will be installed as soon as the equipment can be provided."

Paragraphs 3 and 3 (a) of your letter. Communications. The supply of communications, radio, and sound equipment to the Fleet and the Shore Stations leaves much to be desired, although a great improvement has been noted in the last year.

Specifically it is noted that the Kaneohe Air Station was acquired, built, commissioned, and actually operated prior to the receipt of any radio apparatus, except some which we diverted from its intended advance base use.

Comment. Here is quoted in their entirety the remarks of the Chief of the Bureau of Ships:

"During the fiscal year 1941 the Bureau of Ships placed contracts for radio and sound material amounting to approximately \$110,000,000. The material contracted for included all of the material listed in the 1941 and 1942 Communication Improvement Plans issued by the Chief of Naval Operations and a large amount of additional material required to meet previously unanticipated needs. The funds included in the regular 1941 budget were made available in an appropriation bill which became law on June 11, 1940, but the bulk of the funds utilized during the year did not become available until passage of a supplemental appropriation act in mid September 1940. Considering the time when the necessary funds became available, and the tremendous increase of procurement effort necessary, it is felt that the prosecution of the entire program has been as rapid, as could reasonably be expected under the circumstances. However, it is recognized that many needs of the service are of great urgency and that any delay at [10] all in effecting deliveries after needs have been determined is objectionable. Difficulties in obtaining critical materials and components have in some cases caused serious delays in deliveries under contracts but by use of increased facilities all contractors involved have increased rates of production to a considerable extent. It is expected that most of the serious needs for radio and sound equipment will be taken care of within the next few months.

Funds for the initial allowance of radio equipment for the Kaneohe Air Station were included in the regular 1941 appropriation act, which became law on June 11, 1940. Initiation of procurement of radio material for Kaneohe was commenced immediately after the funds became available. Funds for items later added to the allowance became available in September, 1940.

The tabulation below indicates the present situation as regards radio equipment for the Kaneohe Air Station:

Allowed equipment	Installed	To be shipped	Expected date	Remarks
2 TBM	1	1	Jan. 1942	
2 TBP	2			
1 TBU		1	Mar. 1942	
6 TBW		2	Sept. 1941	
		4	Jan. 1942	
2 TCA		2	Sept. 1941	1 TBO-1 in use
2 TCB		2	Nov. 1941	
1 TCC		1	Aug. 1941	1 TBR-1 installed
4 RBA/RBB/RBC		4	Indefinite	New type—other receivers available if urgently required
6 RAS	6			
1 DY		1	11 Aug. 1941	from NY Wash
1 DP		1	11 Aug. 1941	1 DN from NYMI
1 Inst. LDG Equip.		1	Sept. 1942	#40 on priority list; deliveries start Sept. 1941
1 RAU		1	Oct. 1941	
1 YA		1	Jan. 1942	

There are available in the Pearl Harbor pool several more TBR-1 portable equipments which may be utilized to take care of immediate needs at Kaneohe if required. These TBR-1 equipments are not necessarily reserved or intended for advanced base service, but are available for any use at the discretion of the Commandant or the Commander in Chief.

[11] *Paragraph 3(b) of your letter.* It took BuEng two years to put "Chinese copies" of NRL's Radar on six ships.

Comment. Here follows the remarks of the Bureau of Ships and the Director, Naval Communications Division in order named:

"The Model XAF RADAR equipment developed by Naval Research Laboratory was installed in USS NEW YORK 12-18 December, 1938, and was tested at the same time as the Model XXZ Radar equipment developed by RCA Mfg. Co., and installed in USS TEXAS. These tests continued through March 1939. Report of tests was received from Commander Atlantic Squadron 8 April, 1939. As a result of these tests, the equipment was returned to Naval Research Laboratory for modifications indicated as necessary. For example, the equipment had no calibrating feature installed. A conference was held with representatives of all interested officers of the Department as a result of which it was decided to proceed with the procurement of a limited number of these equipments. The size and weight of the equipment were at the time important factors in the decision. Conferences were held with contractors without delay and a specification was prepared. The requisition was issued 28 July 1939 and the contract was awarded 16 October 1939 to RCA Mfg. Co. The time between the date of requisition and date of contract was utilized by the RCA Mfg. Co., to inspect the model, work up estimates, submit bid and by the Bureaus of Ships and Supplies and Accounts to make award. The first equipment was shipped by factory May 21, 1940. It will be noted that the time for delivery of the first equipment by contractor was approximately 13 months from the date of completion of tests in USS NEW YORK and 7 months after date of contract. The last equipment was shipped by contractor on June 20, 1940. The dates of installation of this equipment were dictated by the dates of availability of the vessels concerned. A matter over which this Bureau does not have control. According to the records of this Bureau, however, installation of the first equipment was completed August 24, 1940, and the last on October 14, 1940, and the last date being approximately 18 months after the receipt of the report on NEW YORK tests."

[Handwritten comment:] Read to here in evidence.

[12] "The Model XAF RADAR, built by Naval Research Laboratory, was tested afloat during the late winter and early spring of 1939. This test indicated that additional equipment should be purchased for trial. A study was made to determine the practicability of installing the equipment afloat; this study disclosed that only ten (10) ships could accommodate the large antenna array without first making extensive alterations to ships or without experiencing serious interference to the radio beam from the ships' structures. Chief of Naval Operations requested procurement of ten (10) production models of the XAF. The earliest that funds could be obtained to manufacture the Model CXAM (copy of NRL Model XAF) was during fiscal 1940. Due to the higher unit cost of the

equipment and the extraordinary expenditures of radio funds in connection with "neutrality enforcement", the Bureau of Ships could manufacture but six (6) complete units. When additional funds were made available by emergency appropriations, fourteen (14) Model CXAM-1's were ordered as "stop-gap" equipment pending completion of development of an improved detector—the Model SC."

[Handwritten comment:] Long winded—what he wants is radars and more radars.

Paragraph 3 (c) of your letter. For years BuEng prevented research by NRL in any form of radio recognition device and hence retarded the production of such apparatus. The Fleet is still without it though it is under manufacture.

Comment. In this connection, the Chief of the Bureau of Ships states:

"The need for a satisfactory recognition device in the fleet has been recognized by the Bureau of Ships as being the single greatest one since the time of the last war and every idea advanced by the fleet, the Naval Research Laboratory or other laboratories that appeared to offer promise has been thoroughly investigated. This research has fully covered the fields of ultra violet, visible, infra red, radio and sound spectrums. Many systems which were developed to a point which warranted service tests have been tested in the fleet and all have been reported unsatisfactory by the fleet even after modification by NRL and other [13] laboratories in accordance with the wishes of the fleet. There has been no lack of funds in this connection. The NRL has been engaged continuously since its establishment in efforts to develop a recognition system. That portion of the statement relating to the preventing of research by NRL in any form of radio recognition is not one of fact."

[Handwritten comment:] The files of NRL contain a letter so stating!

It can be concluded that very substantial additions to Fleet Radar installations will be made before the end of the calendar year.

[Handwritten comment:] High time.

Paragraph 3(d) of your letter. We must have the IFF (Identification, Friend or Foe) for aircraft at once. The program lags and on June 14th only 56 were on order from Canada with indefinite delivery date. See "Aviation" below.

Comment. In regard to the foregoing, the Bureau of Aeronautics remarks as follows:

[Handwritten comment:] Development—Development—Development—The other fellow has it—

"Currently, the Bureau of Aeronautics is concentrating on the earliest practicable development and procurement of suitable RADAR equipment for aircraft. Recognition equipment will be installed in all service aircraft at the earliest opportunity. One hundred (100) ABA (American recognition) sets are now due for delivery, and they will be distributed to the Fleet in the most effective manner possible. Material is being assembled for 1500 American ABA sets which will be put in production by General Electric as soon as a satisfactory service test is completed. [Handwritten comment: Rush.] 356 British I. F. F. sets have been requested; 56 of these sets are being delivered to the Atlantic Fleet and delivery is rapidly being completed."

[Handwritten comment:] Here's hopin'.

The tentative plan for initial RADAR installations in aircraft is as follows: A brief summary of nomenclature is:

a. ASV MK II—British search equipments suitable for VPBs.
b. ASA—American search equipment including high altitude altimeter, suitable for VPB's.

c. ASB—American search equipment, expected to be suitable for 2 and 3 place planes.

[14] d. ASV—MK II (Fleet Air Arm modified), British search equipment for use in large single engine planes.

e. ABA—American recognition equipment.

f. IFF—British recognition equipment.

g. AYA—American high range altimeter.

h. AYB—American low range altimeter.

i. AI—MK IV—British Interception equipment—multi-place airplanes.

Schear equipment (long range British ASV or American ASA) will be installed in all PBV-5 and subsequent VPB models. Initial installations are being made.

It is expected to install ASB (small search equipment) with a low range altimeter in one plane of each section of VTB's. All TBF airplanes will have space reserved for this. It is expected to reserve space in all new VSB and VSO airplanes for the American ASB, and where practicable install this equipment in current types.

Initial installation is now being made of the experimental model of the ASB in an SBD airplane. If successful, a number of these planes will be made available as soon as the equipment is provided.

[Handwritten comment:] Still experiment.

Steps have been taken to obtain models of the British MK II ASV equipment (modified for Fleet Air Arm) for reproduction purposes. It is expected to supplement manufacture of American ASB equipment with an American version of the modified MK II.

Radio Altimeter (high altitude) will be installed as part of the American search equipment in all VPB airplanes. It is planned to equip one airplane of each section of VTB's with high altitude altimeters and another airplane of each section of VTB's with a low range altimeter for use with the ASB equipment (as indicated in paragraphs above research equipment).

Recognition equipment will be installed in all service airplanes at the earliest opportunity. The first 100 American ABA equipments are now due for delivery.

[15] *Interception equipments.* Provision for these equipments will be made in a certain number of F4U airplanes as soon as the development in the United States and abroad of models suitable for use in single engine, single place airplanes permits. Pending this development, a test installation is being made of a British MK IV equipment in an SBD airplane. If successful, a number of these planes will be made available for use as interceptors as soon as this equipment can be obtained from either British or American source.

Projects have been initiated to design search and interception antenna structures which are most readily demountable and which are streamlined as much as practicable. Development of American search and interception equipment will stress ready removal provisions in order to result in maximum of operational flexibility.

[Handwritten comment:] Ought to reap some benefit after this intolerable delay.

Plans for further installation of Radar in carrier and cruiser airplanes are dependent on installation difficulties and initial performance. A more comprehensive plan may be expected to be published about January, 1942.

The Bureau of Ships remarks:

"Deliveries have begun on 104 Model ABA IFF equipments for aircraft together with 32 model BE/BF equipments for shipboard use. These will be given service tests in the fleet together with 3 Model BI equipments for shipboard use. The first BI equipment is due at NRL September 22, 1941. The contractor is assembling material for 1500 additional ABA equipments and further production will be authorized just as soon as tests justify the step. All of the above is of American design but because of design and operational features it will not operate with corresponding British ship, shore or aircraft types. To provide for this contingency two each of the latest British ship, shore and aircraft equipments are being flown to the United States and will be modified for production in the United States and supplied to all forces likely to operate with British forces. These sample equipments are due within a few days according to advices from the Naval Attache, London. The 56 equipments mentioned in the paragraph to which this comment is directed are for Support Force Aircraft and eight are now in the process of being installed."

[16] *Paragraph 3 (c) of your letter.* Radar equipment for submarines is highly important. I am not informed as to exact status of this but understand development is not entirely satisfactory. There is evidence that German subs are equipped with Radar.

In general, Naval shipboard radio and sound equipment is so elaborate that it cannot be manufactured expeditiously. BuEng should have type plans for apparatus of such a nature that they can get results from industry and not make each new piece of apparatus a research job.

[Handwritten comment:] Agree.

Comment. An omni-directional aircraft detection equipment was tested in GRAYLING on 2 August 1941. Although the results of the test were somewhat discouraging, the equipment showed sufficient promise to warrant its manufacture. It is believed that the development of a directional antenna system will greatly improve [Handwritten comment: Yea—but when—] the performance of the submarine equipment; this project will be prosecuted.

Contracts have been awarded for the manufacture of 10-cm surface-ship detection equipment for submarines. This equipment is due for delivery about January 1942. The equipment which is being designed for making night attacks while the submarine is surfaced, is expected to be capable of taking accurate ranges and bearings on capital ships at distances in the order of 10,000 yards.

In order to expedite the manufacture of radio and sound equipment, the Bureau of Ships has frozen on current designs. [Hand written comment: Thank God—] The delay in procurement of radio and sound equipment is not entirely due to the "elaborate" design; the "priority ratings" for raw materials that the Navy Department is assigned greatly affects the production of equipment. The Bureau of Ships also is procuring modified commercial radio equipment.

It has not been conclusively determined that the German submarines are equipped with Radar. It is, however, highly probable that they are so equipped because it is known that these craft operate with much facility at night.

Paragraph 4 (a) of your letter. Pre-Fleet Training. Two units under the Fleet at San Diego, one for patrol squadrons and one for carrier squadrons. More pilots for battleships and cruisers, for training on board ship. Particular emphasis on double complements for patrol squadrons; anticipation of enlisted personnel numbers and training in all categories, particularly patrol squadrons; building up the supply of spare airplanes; accomplishing the training without any further drain on combat readiness of active squadrons.

[17] *Comments.* In this connection, the Chief of the Bureau of Aeronautics remarks:

"On 28 July, I signed a letter that embodied measures for the improvement of aviation training of pilots and other members of flight crews in the intermediate stage that occurs between primary schools and fleet squadrons. I hope the effect will be salutary and beneficial in the immediate future. VP-13 will be held at San Diego to launch an intensive transitional training program in combination with the Training Test and Acceptance Unit already in operation for patrol planes. It is recognized that further drains on combatant squadrons are undesirable but the training centers must continue to function or the supply of pilots for the organization of new squadrons will not be adequate. Every experienced aviation officer in the training establishment ashore will be released for duty in fleet squadrons as soon as he can be replaced. The majority of the expansion of the aeronautical organization afloat will be accomplished without disturbing pilots already in fleet squadrons.

Aside from transitional training in the larger patrol planes, pilots and enlisted members of flight crews must be trained in fleet patrol squadrons whose primary task is their preparation for duty in active combatant squadrons. Although every squadron on the West Coast may be assigned this duty, it will be necessary for Patrol Wings ONE and TWO in the Hawaiian Area to absorb any excess in personnel that cannot be trained effectively because of insufficient numbers of aircraft and qualified personnel.

There will be an advanced carrier training organization at San Diego in accordance with my letter of 28 July. Additional new VO/VS pilots will commence reporting to the Fleet during August. Any of these pilots who cannot be trained expeditiously on board ship should be retained in the advanced carrier training squadron at San Diego for more flying, particularly gunnery, at the discretion of the Fleet.

[18] The priority accorded to the Army and British heavy bomber programs has been the cause of our most urgent attention. The final action on priorities was decided at a conference between the Secretary of the Navy and the Secretary of War which was attended by representatives of the Army Air Corps, the Bureau of Aeronautics and the Office of Production Management. The net result was an A-1-b award to approximately 2,000 (plus or minus 500) additional naval aircraft, and brings a total of 3,596 naval aircraft into the highest priority classification given to aircraft. One hundred per cent spare aircraft are now planned for fleet carrier and ship-based squadrons, and fifty per cent spare aircraft have been requested for patrol squadrons.

In connection with the foregoing, the Chief of the Bureau of Navigation remarks:

"The Chief of Naval Operations in his confidential letter, Op-22-B5, (SC) P11-1, Serial 081322 of July 28, 1941, directed Commander-in-Chief, Pacific Fleet and Commander-in-Chief, Atlantic Fleet to establish as quickly as practicable within their respective fleets, the following units:

(a) Advanced Carrier Training Group, Pacific and Advanced Carrier Training Group, Atlantic—for the Pacific Fleet, in San Diego and for the Atlantic Fleet, in Norfolk, Virginia—Purpose of these groups is to give advanced carrier training to newly graduated naval aviators, fresh from training centers, prior to assignment to carrier units in the two fleets.

(b) Transition Training Squadron, Atlantic and Transition Training Squadron, Pacific—Purpose of these squadrons is to give advanced patrol plane train-

ing to newly graduated naval aviators, fresh from the training centers, prior to assignment to Patrol plane units in the two fleets. These squadrons also train experienced aviators in the operation of the model PB2Y airplanes in the Pacific Fleet and the model PBM airplanes in the Atlantic Fleet.

[19] Experienced Naval Aviators have already been ordered to report to these training groups and squadrons when they are formed by Commander-in-Chief, Pacific and Commander-in-Chief, Atlantic. These aviators will oversee and administer the training of the personnel ordered to these units.

By the letter referred to above, Chief of Naval Operations has indicated that during the months of August to December, 1941, inclusive, a total of 130 additional pilots for battleships and cruisers will be ordered to both fleets. Also, for the same period, 334 carrier pilots and 598 patrol plane pilots will be ordered to the above mentioned training units for assignment to *each* fleet.

After January, 1942, the training centers will be turning pilots out at such a rate that at all times thereafter, we will always have sufficient pilots under advanced and transition training or in the operating aviation units to meet all the fleet requirements, including double complements of patrol squadrons.

Based on present estimates, the output of Class "A" Group IV Schools training aviation ratings and radiomen (qualair) will be approximately 27,096 enlisted men (Navy) from August 1941 through June 1942.

Sixty-five (65) percent of the graduates of these Class "A" Schools have been marked for Pensacola, Corpus Christi, Jacksonville and Miami, until about 8,170 graduates have been fed into the flight training centers, filling their allowances (in total numbers) by about January 20, 1942.

This will leave an estimated balance of 18,926 Class "A" School graduates for the Forces Afloat and other shore establishments by June 30, 1942.

The allowances of patrol plane squadrons have been increased 220% over the 1941 allowances."

Paragraph 4 (b) of your letter. New Torpedo Planes. Highest priority—A-1-a—instead of present priority which is A-1-b. There are only half enough torpedo planes now and they are obsolescent, while war reports demonstrate that there may be no single item of greater naval importance.

[20] *Comment.* The A-1-a rating for torpedo planes was not satisfactory to the War Department and the Office of Production Management without unacceptable reduction in priority of other naval aircraft. There is good reason to question whether a higher priority for torpedo planes would have expedited their delivery. The Navy Department will continue to exert maximum effort to expedite the production of VTB for the Fleet.

Paragraph 4 (c) of your letter. Conversions for Carrier Landing Training. Auxiliary aircraft carrier conversion was dropped because of time and cost factors. These can be greatly reduced by requiring only the characteristics needed for landing training. The need for these ships is extreme. Aircraft carriers should not, and in war cannot, be used for this purpose, while new pilots must be properly trained before joining active squadrons if combat readiness is not to be jeopardized.

Comment. The conversion of the U. S. S. WAKEFIELD and U. S. S. MT. VERNON to auxiliary aircraft carriers with landing features incorporated is contemplated. Steps are now being taken to procure material and equipment. The actual conversions will be initiated whenever present services of these vessels as transports can be concluded. It is probable also that the U. S. S. WEST POINT will be included in the above category.

[Handwritten comment:] and now, if we can get the President to give in—To date the answer is No—

Paragraph 4 (d) of your letter. A. S. V. (Anti-Surface Vessel) Equipment. This is of the highest potential value. Apparently none will be available for patrol planes until December. It can be carried by other planes, as shown by reports of British torpedo plane operations. It should be provided for every plane that can carry it and much earlier deliveries are essential.

There is an aircraft RADAR project set up in the Bureau of Aeronautics with the objective of providing all necessary equipment that can be carried and operated efficiently in aircraft with due consideration for other essential equipment. The training of RADAR operators is underway so that by the time the equipment arrives there will be trained personnel who are essential for its successful operation. ASV sets will be provided as alternate installations in all carrier planes that can accommodate them and all patrol planes will be ASV-equipped. Every possible source of supply, including British and Canadian, is being investigated to accelerate the program. Three hundred Canadian ASV

equipment sets are expected at the monthly rate of one hundred sets commencing 1 October, 1941.

[21] *Paragraph 4 (c) of your letter. J. F. F. (Identification, Friend or Foe) Equipment.* This is absolutely complementary to and essential for effective use of the Radar for aircraft defense of the Fleet. Without it, the Radar cannot differentiate between friendly and enemy airplanes. There is no definite information on deliveries. No delay whatever is acceptable.

Comment. This subject has been discussed elsewhere in this letter. However, it should be remarked that the Interior Control Board is setting up essential requirements for RADAR equipment on board ship. The Board has been advised to incorporate the identification feature in ship control and fire control sets since identification is a very necessary part of the RADAR installation.

Paragraph 4 (f) of your letter. Engines for New Patrol Planes (PBY-5's). Nose section failures have been occurring. Every effort is being made to find and cure the trouble. This should be continued, for it will be no help to the Fleet or to any destination of these planes to get new planes that can't fly in place of older planes that can.

Comment. The Bureau of Aeronautics and the engine manufacturer have been advised of the nose section failures in the engines of VP-14. The loose-coupled shaft in these engines will eliminate the restrictions on operating the engine within the present critical speed range. However, this does not apply to VP-14 but this squadron is being supplied new heavier nose sections which the bureau believes will correct present deficiencies if engine speeds are kept outside the critical range. Only three planes outside VP-14 have encountered failures in the light nose sections. The heavy noses will be shipped from the factory at the rate of ten per week beginning August 11, 1941, with first deliveries to VP-14.

Paragraph 4 (g) of your letter. Landplane Field at Johnston Island. This was removed from the project by the Department. It should be put back. It is needed not only as an adjunct to local defense but, more importantly, as an aid to defense against expeditions headed eastward and as a stepping stone for landplane support of expeditions headed westward.

Comment. Funds in the amount of \$750,000 for this project are available and the necessary construction work has been authorized.

Paragraph 4 (h) of your letter. Keehi Lagoon Development. This will be of very great value to patrol planes in the Hawaiian area. It is the best location for operations of these planes and no other place is suitable for planned patrol plane expansion in this area. Inclusion of facilities for Navy patrol squadrons in this development should be undertaken immediately.

[22] *Comment.* The Navy Department has included Keehi Lagoon as one of the Navy-sponsored developments for commercial seaplanes in the Hawaiian area in its recommendations to the Department of Commerce. The War Department has an appropriation of approximately \$3,330,000 for this project and arrangements are being made for additional funds for the dredging which is expected to commence very soon. Navy patrol plane facilities are not included in the prospective plans for this location. Any special facilities for naval patrol planes for the present at least must be of a temporary nature.

Paragraph 4 (i) of your letter. Development of the N. A. S. Barber's Point. This approved development is very urgently needed. There is a strong tendency to turn down many aviation shore facility items in this area on the basis that they will be available when Barber's point construction is finished. This makes it more than ever mandatory to expedite the work.

Comment. Your comment on the need for this development is supported wholeheartedly in the Department and will receive the most careful attention until it meets the Fleet's needs. Funds for Barber's Point in the amount of \$18,605,000 will be available in August and work begun immediately if the bill, now pending in Congress, is passed by the Senate and signed by the President. The bill has already passed the House and has been approved by the Naval Affairs Committee of the Senate.

I have gone into the subjects you raised in some detail because I want you to be fully advised. Don't hesitate to tell us how you think we can help. We want to be of all assistance possible, and helpful criticism is always in order.

You no doubt have seen in the press about our conference at sea. Aside from being a most historic occasion, it was most helpful. It is to my deep regret that time and distance precluded your being present.

With all good wishes, I am

[Hand written:] Too long—Oh Lord—Too Long.

Sincerely,

BETTY.