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OUTLINE OF NAVAL ARMAMENT AND PREPARATIONS FOR WAR, PART VI

DRAFT

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Outline of Naval Armament and Preparations for War, Part VI

JAPANESE MONOGRAPH
No 174

Preface

Through Instructions No. 126 to the Japanese Government, 12 October 1945, subject: Institution for War Records Investigation, steps were initiated to exploit military historical records and official reports of the Japanese War Ministry and Japanese General Staff. Upon dissolution of the War Ministry and the Japanese General Staff, and the transfer of their former functions to the Demobilization Bureau, research and compilation continued and developed into a series of historical monographs.

The paucity of original orders, plans and unit journals, which are normally essential in the preparation of this type of record, most of which were lost or destroyed during field operations or bombing raids rendered the task of compilation most difficult; particularly distressing has been the complete lack of official strength reports, normal in AG or G3 records. However, while many of the important orders, plans and estimates have been reconstructed from memory and therefore are not textually identical with the originals, they are believed to be generally accurate and reliable.

Under the supervision of the Demobilization Bureau, the basic material contained in this monograph was compiled and written in Japanese by former officers, on duty in command and staff units within major units during the period of operations. Translation was effected through the facilities of Military Intelligence Service Group, G2, Headquarters, Far East Command.

This Japanese Operational Monograph was rewritten in English by the Japanese Research Division, Military History Section, Headquarters, Army Forces Far East and is based on the translation of the Japanese original. Editorial corrections were limited to those necessary for coherence and accuracy.

FOREWORD

This is the last of a series of six monographs in regard to Japan's naval armament in preparation for and during the Pacific War.

Additional monographs covering Japan's naval armament plans are:

	Mono No
Outline of Naval Armament and Preparations for War, Part I	145
Outline of Naval Armament and Preparations for War, Part II	149
Outline of Naval Armament and Preparations for War, Part III	160
Outline of Naval Armament and Preparations for War, Part IV	169
Outline of Naval Armament and Preparations for War, Part V	172

24 November 1952

TABLE OF CONTENTS

	Page
Contraction and Consolidation of Strategic Areas to be Defended at All Costs	1
General Situation	1
Increase in War Production	2
Withdrawals to Shorten the Line of Defense and Concentration of Defensive Power on Inner Lines	7
Preparations Based on All-Out Special Attack Tactics	8
Details of Preparations for Special Attack Operations of the Naval Air Forces	12

CHARTS

Chart No 1	Increase and Decrease in Bottoms During the Pacific War	3
Chart No 2	Status of Aircraft for the "Ketsu-Go" Operation	12
Chart No 3	Outline of the Special Attack Production Plan	16
Chart No 4	Construction Schedule of Special Planes, 20 June 1945	16
Chart No 5	Actual Results and Estimate of Production of Special Planes, 15 July 1945	16
Chart No 6	Secret Bases	18
Chart No 7	Status of Bases for Model 43 Oka	18
Chart No 8	Condensed Report of the Results of Tests at Takeyama Base	21
Chart No 9	Results of "Ko-Go" Tests at Kure Navy Yard	21
Chart No 10	Results of Surface and Underwater Special Attack Weapons Preparation	22

		Page
Chart No 11	Table of Organization of Special Attack Squadrons	22
Chart No 12	Location of Special Attack Bases, 15 August 1945	22

APPENDICES

Appendix I	Major Naval Arms and Weapons Produced from January 1944 to Cessation of Hostilities
Appendix II	Agreement between the Army and the Navy Concerning War Preparations for the First Half of Fiscal Year 1945
Appendix III	Naval General Staff Secret Document No 31

Contraction and Consolidation of Strategic Areas to be Defended at all Costs

General Situation

At the time the War Preparations Plan, Phase Three, was being deliberated, the situation in the Solomons-New Guinea area was rapidly deteriorating. The tremendous amount of equipment able to be produced by the United States as compared with that produced by Japan was having its effect. Taking into consideration her national resources and scientific technical capacity, Japan recognized that it would be impossible to hold her own on her greatly extended fronts. It was, therefore, decided at a council meeting held in the presence of the Emperor on 30 September 1943, to contract and consolidate the strategic areas at all costs.

The main points decided by the Council, in the presence of the Emperor, were that, by the middle of 1944, strategic preparations would be completed to cope with the Anglo-American offensive; the areas to be held at all costs in the Pacific and Indian Oceans were the Kurile Islands, the Bonin, Mariana and Caroline Islands, western New Guinea, Sunda and Burma, and every effort was to be made to maintain sea communications with these areas.

In accordance with the above, transportation of war supplies to areas outside the areas specified at the conference, which had been conducted up to that time despite heavy losses of warships, transports, aircraft, munitions and men, was to be reduced to a minimum and the main ef-

fort was to be directed toward the strengthening of defense in the strategic areas to be defended at all costs.

This decision was made too late, however, and even the new line of defense was too extensive for Japan's national resources and military capabilities. The burden of immediate war preparations, therefore, was not eased, and, at the same time, the difficulties in transportation of war supplies mounted daily, caused by the increasing activities of enemy submarines and aircraft. This greatly delayed the bolstering of defenses in the various areas.

Increase in War Production

As stated in Monograph 172, the Navy had embarked upon the Revised Fifth Naval Armament Expansion Program. This called for the nation, as a whole, to muster its entire power in order to attain the production goal set forth by the "Joint Army-Navy Study in regard to the Material Mobilization Plan for 1943." During the second half of 1943 and the first half of 1944, although production failed to reach the goal set forth in the Revised Fifth Plan, great advances were made, and production reached a peak unprecedented in Japan's history. Had the American invasion of the Marianas, Carolines and Philippines been delayed approximately six months, the implements of war produced by this greatly stepped-up productive effort would have had a marked effect on the war effort.

It is interesting to note that the upward trend in production, which was not affected by the loss of Saipan or Palau, took a sharp downward

plunge after the line of communications to the Southern Areas was severed following the Battle of Leyte and also after Japan proper was exposed to air raids.

The major arms and weapons required for naval operations which were produced from January 1944 to the end of the war are shown in Appendix I.

Although construction of merchant ships was also greatly accelerated by the drastic measures adopted by the Japanese Navy, ship losses, as a result of enemy action, greatly exceeded the construction tonnage, sharply reducing available merchant ships. This was felt to be one of the main reasons for Japan's defeat in the Pacific War.

Chart 1 shows the increase and decrease in bottoms during the Pacific War.

The intensification of war preparations at the front, which was conducted on the basis of the conference in the Imperial Presence on 30 September, was primarily aimed at training and replenishing the fleet and strengthening defensive power in key areas. However, the fleet training did not progress satisfactorily because the greater part of our air strength had to be diverted to the Solomons and New Guinea areas to fight battles of attrition aimed at slowing the enemy's advance. In early February 1944, the Marshall Islands were occupied by the enemy. This meant that our key areas were directly theatened by the enemy. On 17 February, Truk Island, the anchorage of the main force of our fleet, was subjected to a formidable air raid by an enemy task force. This forced the greater part of our surface units to retreat toward Palau,

Increase and Decrease in Bottoms During the Pacific War

(Quantities in thousands of gross tons)

Period	Increase by Construction	Decrease by Losses	Decrease	Total	Percentage Available
At the outbreak of the war				6,384.0	100
December 1941	44.2	51.6	7.4	6,376,6	99
December 1942	661.8	1,095.8	434.0	5,942.6	93
December 1943	1,067.1	2,065.7	998.6	4,944.0	77
December 1944	1,735.1	4,115.1	2,380.0	2,564.0	40
1945 (up to August)	465.0	1,562.1	1,097.1	1,466.9	23
At the end of the war				1,466.9	23

Remarks: The above table shows statistics on steel ships of over 100 tons.

Chart No 1

Davao and Lingga areas. Under these circumstances, it was practically impossible to continue fleet training. Moreover, the activities of enemy aircraft and submarines made our sea communications more and more difficult and transportation of personnel, weapons and other supplies to the Fleet were seriously hampered.

The following is an outline of the measures taken for strengthening defenses in the key areas up to the time of the Leyte Operation, including the Battle of Saipan. This covers approximately one year, to the latter part of October 1944.

Air Defense Units: It was decided to activate 103 air defense units and to dispose them at strategic points on the periphery of the key area, and also at such locations inside the area as Formosa, Ryukyu and Bonin Islands. Upon arrival at their destination, such units were to become an organic part of local base forces or guard units.

The original plan called for Type A air defense units, to be equipped with six antiaircraft guns (12.7 cm) and two searchlights, and Type B units, to be equipped with 24 25mm machine guns as their basic equipment. The shortage of antiaircraft guns, however, made activation of Type A units practically impossible. Hence, most of the units that were sent to the front were Type B and naturally their defensive power was not great. However, losses at sea were only three of the 103 units. Insofar as the number of units was concerned, the scheduled disposition was generally successful. It was also planned to reinforce the front with more antiaircraft guns and mounts as soon as such equipment became avail-

able. This plan, however, never materialized because of the drastic changes in the war situation.

Construction Units: Arrangements were made to activate 25 construction units and to dispatch them, according to the following schedule, to expedite completion of airfields and the strengthening of the defense setup in the areas concerned:

South Seas Area (Truk, Saipan, Guam and Palau):	10 construction units

(Two of these units were later reorganized and diverted to other areas following the sinking of their transports)

Western New Guinea Area:	4 units
Ambon, Kai and Aroe Islands:	5 units
Philippines:	3 units
Andaman Islands:	3 units

Each unit was composed of from 700 to 1,000 personnel and was equipped with the necessary construction material, transportation equipment and light weapons. It was no easy matter to send these units forward, not only because of the large amount of transportation required but also because of the debarkation facilities necessary when they arrived at their destination.

As only very few special land combat units (guard units) were activated during this period, it was necessary to station Army troops on even small isolated islands, in accordance with the fundamental concept that the Army would constitute the main force in land combat. At the same time, steps were taken to coordinate the command system of the Army

and the Navy. Naval units were provided with as many land combat weapons as possible regardless of their assigned areas in order to strengthen the over-all defensive power.

Other major steps taken at this time were: activation and disposition of transport units to increase local transport capacities; strengthening of such organs as the construction and repair departments and air depots to raise construction and repair efficiency in each sector; dispatching of torpedo-adjustment squads as part of the measure to increase the efficiency of supply and maintenance; assignment of tactical guidance squads and technical guidance squads for the improvement of fighting power and techniques; installation of radar equipment at the front, and establishment of personnel recruitment sections in all area fleet headquarters, to which several hundred reserves were assigned.

Despite these efforts, the rapid decline of Japan's national power and industrial potential could not be halted. The main reasons for this were that the implementation of the decisions came too late; the size of the defensive sphere was too great for Japan's national and war potential; United States forces were driving westward with overwhelming strength through the Mariana and New Guinea areas, making lightening advances, and Japan's surface supply lines were under increasing pressure. This was especially true after the middle of 1943, when communications between the Southern Region and Japan proper were seriously menaced through lack of air supremacy in the Mariana, Caroline and Philippine areas.

Efforts to strengthen Japan's defensive power merely resulted in a situation where in an effort to defend all points, none were strong. This was attributed to failure to appraise the situation correctly and to adopt a thorough priority system for the areas to be defended.

Withdrawals to Shorten the Line of Defense and Concentration of Defensive Power on Inner Lines

In February 1944, just as several defensive projects, based on the national policy as agreed at the Conference in September 1943, were being put into effect, United States forces, which had already occupied the Marshalls area, launched an all-out air attack against Truk. Next, during the latter part of March and early April, theylaunched large scale air attacks against the Palau area. Simultaneously, theyoccupied the northern coast of New Guinea and continued their advance. In the latter part of May they succeeded in seizing Biak Island. Subsequently, on 9 June, they launched operations to occupy Saipan.

The Navy, based on its estimate that the battle for the Marianas would constitute the decisive battle of the war between Japan and the Allies, carried out "A-GO" Operations, throwing almost the entire fleet into the fray. Despite desperate fighting, the battle situation became worse and the Japanese forces retreated after their air and surface forces had sustained critical losses. It was felt that prospects of victory were fast fading with the defeat of the forces in the Marianas area.

The tempo of advance of the United States forces increased steadily. They occupied Tinian Island in July and Peleliu and Morotai Islands by the middle of September. In October, enemy task forces conducted air

raids on Formosa and the Ryukyus. On 20 October, the enemy launched a campaign to occupy the Leyte Gulf area. At this juncture, our fleet, although not fully recovered from the damage sustained in the "A-GO" Operations, and consequently unprepared for a decisive battle, launched a desperate assault upon the enemy with its entire forces. Because of the enemy's air supremacy, however, our fleet was dealt a near fatal blow in this engagement. This resulted in air and sea supremacy, which the Japanese forces had maintained for years in the Far East, being completely yielded to the enemy.

The Japanese Navy, under the circumstances, was confronted with the necessity of drastically shortening its defense lines. It was decided to limit the key area to the area extending from the Kuriles to Formosa, and, at the same time, to establish impregnable defenses on Japanese islands south of the Homeland as well as on Iwo Jima and the Ryukyus. The greatest defensive strength was to be concentrated on Iwo Jima and Okinawa. These emergency changes in policy were carried out within the required time limit because of the proximity of the involved areas to the Homeland, and, at the same time, steady progress was made in the fortification of the inner sectors.

Preparations Based on All-Out Special Attack Tactics

The concept of special attack tactics (the tactic of resorting to one-way or suicidal missions for certain destruction of the target) was not entirely new in the history of the Japanese Army and Navy. The Port Arthur blockade in the Russo-Japanese War, the demolition mission of the

three demolition tube heroes (Nikudan-Sanyushi) in the China Incident and the midget submarines employed at Pearl Harbor, all possessed some features of special attack tactics. There are also many instances in the history of Japan in which men voluntarily acted in a manner similar to a special attack mission, but these acts were not specifically ordered by their superiors. The attacks carried out by the Kamikaze Special Attack Unit and the Type A Midget Submarine Unit (Cebu) during the operations in the Philippines area, during and after October 1943, were probably the first attack missions that were planned and ordered by competent commanders. The results achieved by these special attack units were unexpectedly good in comparison to the small force committed. However, it was felt that it was a great tragedy that Japanese field commanders were forced to resort to such tactics because of the rapidly deteriorating situation resulting from the enormous difference in fighting power between the Japanese and Allied forces.

These desperate attack tactics employed by field forces were inevitably reflected in the policies adopted by those concerned with war preparations. Urgent demands for the production of weapons suitable for these special attack tactics originated in the Naval General Staff and immediate response was given to the commands by the Navy Ministry. Inasmuch as the Japanese Navy had been studying weapons for this type of warfare for some time, naval authorities were fairly optimistic regarding the realization of the project. The greatest difficulty was that the immediate need for such weapons allowed little time for trial manu-

facture, tests and research.

In October 1943, as a result of negotiations between the Navy Ministry and the Naval General Staff, the following agreement was reached:

The Oka type aircraft (Maru Dai), which had already been tested and approved for special attack purposes, would be used. The Kaiten (commonly known as human torpedoes) and the Shinyo (commonly known as crash boats), in addition to the Type A midget submarine which had already been produced, would be used for surface attacks. Trial manufacture and test runs were made where necessary, and activation of training units was begun.

By adopting latent plans, a variety of new weapons for special attack tactics was produced by the end of 1944. Mass production of such weapons as aircraft known as the "Shusui" and "Kikka", and surface and underwater weapons known as the "Koryu" and "Kairyu" were planned and initiated. In addition, numerous other latent designs were adopted and produced.

In February 1945, the outcome of the Philippines campaign had been decided and, by the end of the same month, the supposedly impregnable fortress of Iwo Jima had been lost after furious fighting. It became increasingly clear that the enemy was about to launch large scale air raids against the Japanese Homeland. Under the circumstances, we were forced to concentrate our war preparations on the production of aircraft and special attack weapons and the completion of defenses for the decisive battle for the Homeland. In view of this situation, the Japanese

Navy dispersed its production facilities while maintaining a maximum output, strengthened air defenses and, at the same time, initiated all-out war preparations based on special attack tactics.

All war preparations were executed in close cooperation with the Army and each service augmented the deficiencies of the other. This was clearly indicated in the agreement reached between the Army and Navy High Commands on 1 April 1945 (Appendix II).

In accordance with this agreement, on 6 April 1945, the Naval General Staff held a conference with the Navy Ministry in order to decide on the war preparations to be made during the first half of the fiscal year 1945. Details of this conference are given in Naval General Staff Secret Document No 31, 6 April 1945 (Appendix III).

The Navy Ministry completed all research work and reached full agreement with the War Ministry. Although some slight differences in estimates had to be adjusted, the Navy Ministry mapped out a plan of execution which was generally in line with the Naval General Staff's demand and devoted itself to its enforcement.

In the meantime not only did Iwo Jima fall in late February and the Okinawa Invasion Operation begin in early April, but the Homeland was also subjected to large scale day and night air attacks, which occurred almost continuously after the beginning of March. This resulted in heavy damage to personnel and equipment and gravely threatened communications with China and Korea. As a result, the nation's resources, war potential and productivity began to show a rapid decline.

Detailed plans were made to ready a total of 5,000 standard aircraft, including those newly built or repaired, to equip most of them with special attack equipment and, at the same time, to accelerate as much as possible mass production of special attack aircraft. As far as standard aircraft was concerned, we fell only slightly short of our goal. However, production of special type aircraft lagged considerably, especially the "Shusui", "Ki 115" and "Kikka" types. Although these latter were begun, they were not completed in time to contribute to the war effort.

The status of aircraft for the "Ketsu-Go" Operation, (Homeland Decisive Battle) as of 15 July 1945, was as shown on Chart 2.

Details of Preparations for Special Attack Operations of the Naval Air Forces

First Phase: Since operations on the Japanese mainland itself were considered inevitable as the next phase of operations at the time of the commencement of the Iwo Jima Operation in February 1945, a plan was formulated on 1 March to reorganize the entire naval air forces, primarily for the purpose of launching special attacks. On the same day, the Naval Combined Air Training Command was reorganized into the Tenth Air Fleet and incorporated into the Combined Fleet. Because of the acute shortage of aircraft, as well as fuel, at that time, priority was given to the training of special attack units and training of flight personnel, in general, had to be temporarily suspended. With preliminary training and preparations for converting training aircraft into special attack planes gener-

Status of Aircraft for the "Ketsu-Go" Operation

Type of Aircraft \ No. of Aircraft	3d Air Fleet		5th Air Fleet		10th Air Fleet		Total	
	Allot	Opnl	Allot	Opnl	Allot	Opnl	Allot	Opnl
"Ko"-type Fighters	312	200	242	141	119	75	673	416
"Otsu"-type Fighters (Intercepter)	137	50	136	55	3	2	276	107
"Hei"-type Fighters (Night fighter)	133	91	28	16			161	107
Bombers			88	60	166	111	254	171
Carrier-bombers	157	113	119	99	99	65	375	277
Carrier-based Attack Planes	90	80	52	44	65	24	207	148
Land-based Bombers	40	32	49	40			89	72
Land-based Attack Planes	25	12	60	48	112	63	197	123
Land-based Recon Planes	49	31	55	16			104	47
Seaplanes	152	120	71	69			223	189
Intermediate Trainer	478	275	1,106	978	659	445	2,243	1,698
"Shiragiku" Utility Trainer	167	131	238	174	19	15	424	320
Total	1,740	1,135	2,244	1,740	1,242	800	5,226	3,675

Abbreviations: Allot -- Allotment Opnl -- Operational

Chart 2

ally reaching completion in the middle of May, the 11th Air Flotilla, whose strength was approximately half that of the Tenth Air Fleet, and one-half of the 13th Air Flotilla resumed training.

The bombs to be loaded on the training aircraft which had been converted into special attack planes were as follows:

Type of Aircraft	Bombs (kg)	Number
Type-93 Intermediate Trainer	250	1
Type 2 Intermediate Trainer	250	1
SHIRAGIKU Utility Trainer	250	2
Type-94 Reconnaissance Seaplanes	250	2
Type-95 Reconnaissance Seaplane	250	1
Type Zero Reconnaissance Seaplane	250	2
Type Zero Observation Plane	250	1
Type Zero Training Fighter	250	1
Type Zero Carrier Fighter	250 or	1
	500	1

Second Phase: The enemy landed on Okinawa in late March 1945 and as hostile attacks against the Japanese mainland became imminent with the unfavorable conclusion of operations in this area in late June, a speedy completion of preparations for the decisive battle on the mainland became imperative. It was estimated at that time that the enemy invasion of the mainland, anticipated about September at the earliest, would be directed against the southwestern part of Japan proper and that the first wave of the enemy invasion forces would comprise approximately 10 divisions carried by 1,000 transports. It was also estimated that if army and naval

air forces could succeed in sinking half of the transports within the first ten days of the landing, the enemy's attempt could be smashed. On the basis of the above estimate, the Navy undertook to construct approximately 5,000 standard aircraft by the middle of August.

Furthermore, with a view to compensating for losses and preparing for the second and succeeding assaults of the enemy, the need for special aircraft, taking into consideration such factors as aircraft, fuel and flight personnel, became absolutely imperative. The number of standard aircraft to be built was estimated at 5,000 on the basis of the following figures.

Number of enemy vessels to be sunk:	500
Estimated ratio of hits by suicide planes (based on battle experience gained at Okinawa)	
Against the carrier striking force:	1/9
Against troops transports:	1/6
Number of aircraft required against troop transports:	3,000

In addition to the above, taking into consideration the condition of our aircraft at that time, approximately 350 planes were to be assigned to attacks against the carrier striking force and, taking their actual operating capacity and losses prior to the operation into consideration, the number of aircraft required was estimated at 5,000.

In carrying out the decisive battle on the mainland, the naval air forces planned to thwart the maneuverings of the enemy's carrier striking force with one element and attack the troop transport with their main

strength.

Matters to which special attention was given for the maximum utilization of the entire naval air strength, as mentioned above, were as follows: speedy preparation of standard aircraft; speedy preparation of special aircraft; construction and strengthening of air bases, and measures for increasing the efficiency of the special attack planes.

a. Speedy preparation of standard aircraft:

(1) Measures taken to secure aircraft production: The growing intensity of enemy air attacks, as well as the confused state of production and transportation, seriously hampered production of new aircraft. Especially, because of heavy damage to engine plants, production of engines did not keep pace with production of fuselages. Therefore, every effort was made to secure the production of new aircraft by equipping newly-built fuselages with repaired engines.

(2) Acceleration of aircraft repairs: Among the aircraft requiring repairs at that time, the work on approximately 700 planes was expected to be completed by the middle of August. To facilitate maintenance of these aircraft, repair teams, organized by mobilizing all technicians of the Air Technician Depot, the Yokosuka Naval Air Group and the research organs of each construction and repair unit, were dispatched to the bases.

(3) Equipping standard aircraft with special attack weapons: All aircraft, except training seaplanes, were equipped with special attack weapons.

b. Speedy preparations of special aircraft: To supplement the shortage of standard aircraft, construction of special aircraft was required. From the viewpoint of battle preparations, these special attack aircraft, which had orginally been designed for special attack purposes, had many advantages compared with the standard aircraft.

Because of the decrease in production and repair capacities due to enemy air raids and the lack of training for flight personnel, and because of the shortage of aviation fuel, standard aircraft could not meet even half the operations requirements either in quality or quantity. Therefore, special aircraft were required to satisfy the following general conditions: A high ratio of hits (by the adoption of special attack methods); maximum effectiveness; economy of materials; simplicity of operation; simplified training (so that the planes could be operated by young flight personnel); economy of fuel, and high performance.

The plans for the production of special planes and the actual results achieved are shown on Charts 3, 4 and 5.

c. Maintenance and strengthening of air bases: Since the interceptor fighters and the antiaircraft defense capabilities on the ground were inadequate and as aviation fuel was running low, also there was a great strength disparity between friendly and hostile air forces, restrictions on the aggressive use of interceptor fighters were inevitable. Therefore, the adoption of an effective plan for ground defense against heavy air attacks and for the preservation of the necessary air strength until the decisive battle on the Homeland was imperative.

Chart 3-a

Outline of the Special Attack Production Plan

			Kikka
Objective		1	Acquisition of land attack planes suitable for attacks on enemy ships approaching within a short distance. To be mass production.
Type		2	Turbine-rocket twin-engined monoplane
Principal Measurement (Meters)		3	Smallest possible type. Measurement when wings are folded: Full width : 5.3 Full length: 9.5 Full height: 3.1
Engines to be Installed		4	Two TR-12 Engines
Crew		5	One
Capacity and Armament	Maximum Speed (Knots)	6	335 ..... Close to sea level. 365 ..... At an altitude of 6,000 meters
	Range	7	200 miles close to sea level 300 miles at an altitude of 6,000 meters
	Climbing Power	8	
	Landing Speed (Knots)	9	80
	Bomb Load (kg)	10	500
	Radio Equipment	11	Model 3, Type-1 Radio-telephone set Receiver only
Air Groups in Charge (Date of Activation)		12	724th Air Group (1 July 1945)
Remarks		13	Undergoing experimental production and tests. About six months behind the scheduled date of completion and still incomplete.

Chart 3-b

Outline of the Special Attack Production Plan

	Oka	
	Type 11	Type 22
1	Acquisition of special attack gliders that may be released from the Type-1 land attack plane	Acquisition of special attack planes which may be released from "Ginga" and which are capable of flying by their own power
2	Powder-rocket midwing monoplane	Rocket-engined midwing monoplane
3	Full width : 5.6 Full length: 6.06 Full height: 1.16	Full width : 4.12 Full length: 6.88 Full height: 1.15
4	Three powder rockets	One Tsu-11 Engine
5		One
6		230 ..... close to sea level
7	20,000 meters when released at a speed of 250 knots at an altitude of 3,500 meters	50 miles when released at sea level. 70 miles when released at a speed of 240 knots at an altitude of 4,000 meters
8		
9		
10	1,200	600
11		
12	721st Air Group (1 Oct 1944)	722d Air Group (15 Feb 1945)
13	Used in the Okinawa operation and proved to have excellent performance	Experimental production was completed. Although good results were obtained there was no opportunity to use the plane in battle

Outline of the Special Attack Production Plan

	Oka Type 43	Shusui
1	Acquisition of special attack planes which may be released from the "Renzan" or catapulted from the ground	Acquisition of rocket-engined interceptor fighters with a great capacity
2	Turbine-rocket midwing monoplane	Rocket-engined tailless monoplane
3	Full width : 9.0 Full length: 8.16 Full height: 1.15	Full width : 9.5 Full length: 5.85 Full height: 2.7
4	One NE-20 Engine	One KR-10 Engine
5		One
6	280 ..... Close to sea level	432 ..... At an altitude of 10,000 meters
7		5.5 minutes after climbing to an altitude of 10,000 m at a maximum speed of 432 knots
8		Takes 3.5 minutes to climb to an altitude of 10,000 meters
9		
10	800	11 30mm-machine guns
11	Receiver only	Receiver only
12	725th Air Group (1 Jul 1945)	312th Air Group (5 Feb 1945)
13	Now undergoing experimental production and tests. For coastal defense purposes, this type of plane which may be catapulted from the ground, is under production in great numbers.	Test flights were undertaken twice, but failed owing to defective engines, and the crew perished. Experimental production carried out jointly by the Army and Navy.

Chart 3-d

Outline of the Special Attack Production Plan

	Toka	KI-115	Baika
1	"KI-115" plane with "HA-33" engine	Acquisition of special attack planes in which various types of engines such as the "Kotobuki", "Sakae", "Kinsei" and "Zuisei" may be installed	Acquisition of special attack gliders designed to attack small landing craft approaching within a short distance
2	Single-engined low-wing monoplane	Single-engined low-wing monoplane	Rocket-engined low-wing monoplane
3	Full width : 6.72 Full length: 8.50 Full height: 3.10		
4	One HA-33 Engine		Rocket engine built for experimental purposes
5	One	One	One
6	280 ... At an altitude of 4,200 m		¥250
7	Approximately 600 miles		150 miles
8			
9			
10	500	500	250
11	Receiver only	Receiver only	
12			
13	Now undergoing experimental production and tests. Converted Army planes	Now undergoing experimental production and tests. Same type as the Army plane built for experimental purposes.	War ended while the demand for experimental production was under discussion

Construction Schedule of Special Planes

(20 June 1945, First Section, General Affairs Bureau, Aeronautical Department)

	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Oka (Model 22)	6	49	30	50	60	60	60	
Oka (Model 43)			2	10	22	38	65	80
Kikka (By Aeronautical Department)	Experimental Manufacture Final		12 13 11	125				
Kikka (By Naval Technical Department)					10	40		
Shusui		35	90	145	225			
Ki 115				10	150	320	400	

Chart 4

Actual Results and Estimate of Production of Special Planes

(15 July 1945, Second Section, General Affairs Bureau, Aeronautical Department)

Type	Name of Manufacturer	Apr	May	Jun	Jul	Aug	Sept
Shusui	Mitsubishi Co	4			5	14	35
	Japan Aircraft Co			1	7	22	50
	Fuji Co					1	3
Kikka	First Depot			1	10	30	45
	First Air Depot					(2 Tng)	5 - (3 Tng)
	Kyushu Aircraft Co					5	15
	Naval Technical Depot						
Oka (Model 22)	First Technical Depot			48			
	Aichi Co				5	20	40
Oka (Model 43)	First Technical Depot					8	12
	12th Air Depot						
	Aichi Co						
Ki 115	Naval Technical Dept						40
	Showa Co						10

Abbreviation: Tng -- Training Plane

Chart 5

On the other hand, in order to effect maximum utilization of the counterattacking capabilities of our aircraft within the shortest possible time (in approximately 10 days) against an enemy invasion of the Homeland, training planes of poor maneuverability and special planes had to be assigned in advance to areas near the anticipated invasion point. Since special installations were necessary for these special planes, because of their characteristics, the bases then in use were inadequate. Accordingly, maintenance of the bases was carried out in the following phases.

Strengthening of established bases: To strengthen the 70 established land plane bases and the 24 seaplane bases in the Homeland, construction and maintenance of taxi strips, plane dispersal shelters, covered revetments and tunnels and the speedy establishment of underground as well as dispersed installations for quarters, communications and construction apparatus were undertaken with the time of completion set for the middle of August. The location of the established bases at that time was as follows:

Location	Land-plane Bases	Seaplane Bases	Total
Hokkaido	6	1	7
Ou District	6	2	8
Kanto District	11	4	15
Chubu District	9	2	11
Kinki District	4	3	7
Chugoku District	3	2	5

Shikoku District	5	2	7
Kyushu District	19	7	26
Korea	7	1	8
Total	70	24	94

Maintenance of secret bases: Construction of secret bases (called pasture ground) throughout the country for dispersal and readiness, or for attack bases, of the special attack units, which consisted primarily of training land planes, and maintenance of the western and eastern parts of the mainland by the target dates of 15 August and the end of September respectively, were planned and carried out. In view of the nature of the above bases, attention was paid to camouflage from the time of construction. They were maintained by taking special precautionary measures, such as leaving houses and trees in the secret bases intact until the air units advanced to the bases. The location of the secret bases known as pasture ground was as shown on Chart 6. Chart 7 gives the location of bases prepared for Model 43 Oka special planes in accordance with Yokosuka Naval District Top Secret Order No 496, in May 1945.

In addition, the Osaka Guard District planned to establish six catapults and prepare 25 sheds of Oka bombs in the vicinity of Tanabe.

d. Measures to increase the effectiveness of the special attack planes: Special attack planes were used for the first time in the Philippines in 25 October 1944. They produced not only psychological effects, but also actually inflicted heavy damage on the enemy. This method of attack was made possible by the imbued patriotism of all com-

Chart Showing Secret Bases (Called Pasture-Ground)

District	Name	Runway	Prefecture, County, Village	Remarks
Yokosuka	Yodanhara	50x1,200; extension made to the east & west	Miyagi Ken, Kurihara Gun, Fujisato Mura	Generally completed at the end of August
	Babadaira	60x800; SN	Fukushima Ken, Adachi Gun, Oyama Mura	Generally completed
	Miyota	60x800	Fukushima Ken, Tamura Gun, Moriyama Machi	Generally completed at the end of July
	Asakawa	70x500; EW 30x600; SN	The Suigun Line (Iwagi Asakawa)	Generally completed
	Ebigashima	60x800	Ibaragi Ken, Makabe Gun, Omura	Generally completed at the end of July
	Ohatake (Fujisawa)	60x800	Ibaragi Ken, Niihari Gun, Fujisawa Mura	Generally completed
	Katsuragi	60x800	Ibaragi Ken, Tsukuba Gun, Katsuragi Mura	Generally completed
	Okabe	60x800	Ibaragi Ken, Inashiki Gun, Okada Mura	Generally completed at the end of August
	Negata (2d Kisarazu)	50x600	Chiba Ken, Kimitsu Gun, Negata Mura	Generally completed at the end of August. ((Hitachi Aircraft Co (Hitachi Sha))
	Oyama (2d Atsugi)	100x1,800 NNW	Kanagawa Ken, Koza Gun, Ayase	Same as above
	Iwamurada	50x600; NNW	Nagano Ken, Minami-saku Gun, Iwamurata Machi	Generally completed at the end of August

(Cont'd)

Chart Showing Secret Bases (Called Pasture-Ground)

District	Name	Runway	Prefecture, County, Village	Remarks
Yokosuka	Yoshioka (2d Oi)	60x900; NNW	Shizuoka Ken, Oi, Wadaoka Machi	Generally completed
	Bazu	50x600; extension made	Aichi Ken, Nukada Gun, Miai Mura (TN Presumably Kawai Mura)	Generally completed
	Iwatsu		Aichi Ken, Nukada Gun, Iwatsu Mura	Generally completed at the end of July. ((Nakajima Aircraft Co (Nakajima Sha))
	Takanoo (3d Suzuka)	60x1,200; NW	Mie Ken, Kawage Gun, Takano Mura (TN Presumably Takanoo Mura)	Same as above
Maizuru	Takegata (TN Presumably Masugata)	60x800	Yamagata Ken, Mogami Gun, Yamuki Mura	Generally completed at the end of July
	Tamanohara (TN Presumably Tamano)	60x800	Yamagata Ken, Kita-murayama Gun, Tamanohara Mura (TN Presumably Tamano Mura)	Same as above
	Yonasawa	60x800	Yamagata Ken, Nishi-Murayama Gun, Shigematsu Mura (TN Presumably Takamatsu Mura)	Same as above
	Urushiyama	300x1,000; SN	Yamagata Ken, Higashi-Murayama	Already established ((Hitachi Aircraft Co (Hitachi Sha))

(Cont'd)

Chart Showing Secret Bases (Called Pasture-Ground)

District	Name	Runway	Prefecture, County, Village	Remarks
Maizuru	Tazu	50x700; extended to 1,200	Ishikawa Ken, Kashima Gun, Soma Mura	Generally completed at the end of July. ((Nakajima Aircraft Co (Nakajima Sha))
	Atago (Fukui)	50x700; extended to 1,200	Fukui Ken, Nibu Gun, Takano Mura (TN Presumably Yoshino Mura)	Generally completed at the end of July ((Aichi Aircraft Co (Aichi Sha))
	Shiga	60x1,000; NNE	Shiga Ken, Shiga Gun, Shimo-sakamoto Mura	Same as above
	Hikone	30x600 (60x1,200)	Shiga Ken, Inuyama Gun	30x600 ... completed at the end of July. 60x1,200 ... completed at the end of August. ((Mitsubishi Aircraft Co (Mitsubishi Sha))
	Ayabe	30x600; EW	Kyoto Fu, Ikaruka Gun, Ikuda Mura	Generally completed
	Oshinotsu	30x600	Tottori Ken, Seihaku Gun, Oshinotsu Mura	Same as above
	Naoe	30x600; EW	Shimane Ken, Hinokawa Gun, Naoe Mura	Same as above
Osaka	Ichiba (2d Tokushima)	100x1,200; EW	Tokushima Ken, Awa Gun, Ichiba Mura	Generally completed ((Kawanishi Aircraft Co (Kawanishi Sha))
	(2d Yamato)			

(Cont'd)

Chart Showing Secret Bases (Called Pasture-Ground)

District	Name	Runway	Prefecture, County, Village	Remarks
Kure	Kuniyasu (Kabe)	60x1,200; NE	Hiroshima Ken, Takata Gun, Neno Mura	Generally completed at the end of August
	Shimokawara	30x600; NNE	Hiroshima Ken, Saeki Gun, Sakagami Mura	Same as above
	Shiroyama (Iwakuni)	30x600; 2 runways, NE	Yamaguchi Ken, Kuga Gun, Fujisawa Mura (TN Presumably Fujikawa Mura)	Same as above
	Osaba	30x600; NNW	Yamaguchi Ken, Yoshiki Gun, Osaba Mura	Same as above
	Akago	30x600; NW	Yamaguchi Ken, Mine Gun, Akago Mura	Same as above
	Tano	30x600; NW	Ehime Ken, Shuso Gun, Tano Mura	Same as above
	Takenoshita	30x600; EW	Ehime Ken, Onsen Gun, Haishi Mura	Same as above
	Kamimurashima	30x600; EW	Ehime Ken, Kita Gun, Sugeta Mura	Same as above
	Niida (2d Kochi)	100x1,800; EW	Kochi Ken, Kami Gun, (TN Presumably Takaoka Gun), Niida Mura	Generally completed at the end of August
	Kubokawa (3d Kochi)	60x1,200; SN	Kochi Ken, Takaoka Gun, Kubokawa Machi	Same as above
	Saikawa	30x600; NE	Fukuoka Ken, Miyako Gun, Saikawa Mura	Same as above

(Cont'd)

Chart Showing Secret Bases (Called Pasture-Ground)

Distirct	Name	Runway	Prefecture, County, Village	Remarks
Kure	Nakatsu	30x600; NW	Oita Ken, Shimoge Gun, Tsurui Mura	Same as above
	Kusaji	30x600; EW	Oita Ken, Nishi-Kunisaki Gun, Kusaji Mura	Same as above
	Usuki	30x600; NE	Oita Ken, Kita-amabe Gun, Usuki Machi	Same as above
	Totsugi	80x1,500; NE	Oita Ken, Oita Gun, Totsugi Mura	Same as above
	2d Iwakuni	50x520; NS	Yamaguchi Ken, Kuga Gun, (TN Presumably Kumage Gun), Marifu Mura	The northern part adjoins the airfield
Sasebo	Naokata	30x600; NNW	Fukuoka Ken, Onga Gun, Tonno Mura	Emergency runway; generally completed on 15 July
	Tatara	28x1,000; NE	Fukuoka Ken, Chikushi Gun, Kasuga Mura	Generally completed
	Ogi	30x600; ENE	Saga Ken, Ogi Gun, Ogi Mura	Same as above
	Ainoura	30x600; ESE	Nagasaki Ken, Kita-matsuura Gun, Ainoura	(Drill ground of marine corps)
	Kawatana	30x600; EW	Nagasaki Ken, (Higashi)-Sonoki Gun, Kawatana Cho	Generally completed (Factory site)

(Cont'd)

Chart Showing Secret Bases (Called Pasture-Ground)

District	Name	Runway	Prefecture, Country, Village	Remarks
Sasebo	Shimabara	30x600; NNW	Nagasaki Ken, (Shimabara Shi), Shimabara	Generally completed
	Unzen	30x390; ENE	Nagasaki Ken, Minami-takaki Gun, Obama Machi	Same as above
	Takematsu (Shinomura)	50x1,350; NNW	Nagasaki Ken, Higashi-sonoki Gun, Takematsu Cho	50x950 Generally completed
	Makinohara	60x900; NW	Kagoshima Ken, Aira Gun, Shikine Mura	Generally completed
	Nagao (Iwakawakaido)	60x1,200; NE	Kagoshima Ken, Kimotsuki Gun, Kasanohara Mura	Generally completed
Yokosuka	Kantatsu	30x600	Ibaragi Ken, Niihari Gun, Ishida Mura	Already established. Runway of the Tsuchiura Air Group

Preparation of Bases for Special Planes
Bases for Model 43 Oka

(Yokosuka Naval District Top Secret
Operational Order No 496, 20 May 1945)

Name of Base	Catapults	Completion Date	Sheds of Oka Bombs	Completion Date
Izu Peninsula	8	Middle of August	5 20 20	Middle of August Middle of September Middle of October
Southern Boso Peninsula	6	Middle of August	Same as above	Same as above
Eastern Boso Peninsula	6	Middle of August	Same as above	Same as above
Vicinity of Tsukuba	6	Middle of September	5 20 20	Middle of September Middle of October Middle of November
Miura Peninsula	3	Middle of July	5 10	Middle of July Middle of November
Vicinity of Oi	6	Middle of October	5 20	Middle of September Middle of October
Vicinity of Toba	6	Middle of October	Same as above	Same as above

Chart 7

bat men from commanders down to crewmen. Therefore, the High Command exerted efforts to produce as highly effective special attack planes as possible. The following are the orders and results concerning experiments and research on special attack planes:

20 May 1945

From: Chief, First Bureau, Naval General Staff, Imperial General Headquarters

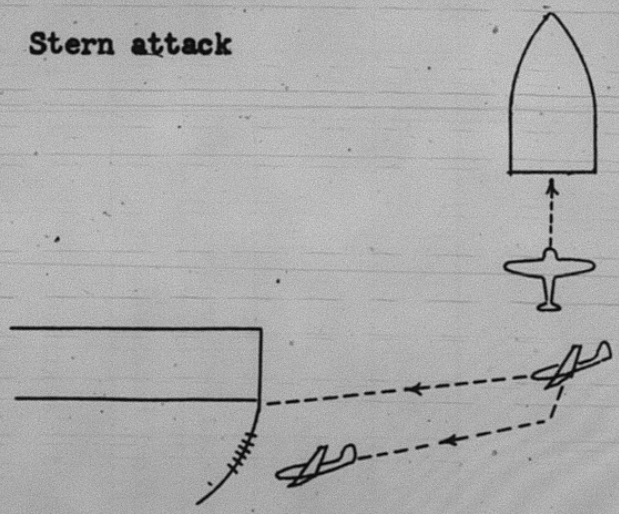
To : Chief, Navy Affairs Bureau, Navy Ministry
Chief, General Affairs Bureau, Navy Aeronautical Department
Chief, General Affairs Bureau, Navy Technical Department

Request Concerning an Increase in the Effectiveness of Special Attack Planes

In view of the great difference in air strength between the enemy and ourselves and the degree of training of Navy airmen, greater importance should be attached to special attack planes. Judging from past combat experiences and statements of prisoners of war, it is impossible to inflict a fatal blow on large enemy vessels, because the equipment and methods used by the present special attack planes are inadequate for complete penetration. Therefore, it is requested that the following matters be immediately studied in order to increase their effectiveness.

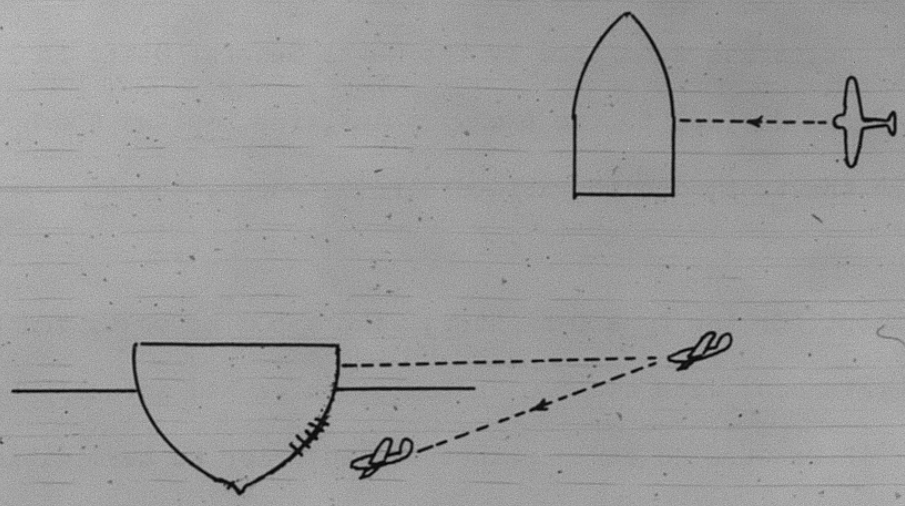
1. It is requested that a test be conducted immediately in order to deliver successful bomb hits below the waterline of enemy vessels by special attacks:

a. Stern attack



(Even if the bomb does not hit and explode at the ship's bottom, there is a strong probability that it will reduce mobility by hitting the armorless stern near the water line.)

b. Side attack



2. Method of increasing the approach speed of special attack planes: It is requested that the wings of the special attack planes be removed during the dive in order to achieve a sudden increase in speed and to minimize damage by enemy interception and defensive fire. Furthermore, this will increase the effect of the hits by increasing the approach speed. It is requested that this procedure be applied to the Ki-115 and that measures be taken immediately for their mass production.

3. It is requested that tests of V-head bombs be completed immediately and that they be supplied to the operational forces.

4. Testing of explosive charges to increase bursting effect: It is requested that methods of producing a more powerful bursting effect, to be employed by the special attack plane by loading it with liquid oxygen, hydrogen peroxide or yellow phosphorous, be studied and tested.

5. It is suggested as a method of using these new charges as substitutes for bombs, that the obsolete torpedo air chamber (re-

move rear part, including the torpedo engine room) be used by filling it with hydrogen peroxide, et cetera.

As requested, tests of explosive charges were held at Takeyama and Kure. The results of these tests are shown on Charts 8 and 9.

A request for testing the effectiveness of special attack planes by using a real warship as a target and catapulting special attack planes from catapults was submitted by the Naval General Staff in late May. It was first decided to use two warships, the Ise and the Hyuga. However, in the test, due to various circumstances, the Aso was decided upon.

Except for the Type 0 Fighter, with a 500 kg bomb, and the land bomber (Francis) with two 800 kg bombs, which had actually been used in combat, there were no other planes tested prior to termination of the war. Even the above two tests were mainly the result of the efforts of the combat forces.

Surface and underwater special attack weapons: The Japanese Navy, which had long been accustomed to building large vessels and big guns, began to concentrate on the construction of small vessels and craft from the time of the Revised Fifth Replenishment Plan. At the same time attention was shifted to mass production of special attack weapons.

Surface and Underwater Special Attack Weapons Preparation Plan

	Apr	May	Jun	Jul	Aug	Sep	Total
Submarines (Small)		2	4	8	13	13	40
KORYU (Midget submarine)	27	33	50	100	150	180	540

Condensed Report of the Results of Tests at Takeyama Base

	Date	Type of Aircraft	Bombs	No. of Bombs	Thickness of Armor Plate	Angle of Incidence	Target Angle	Speed	Results
1	17 Jul	Type 93 Intermediate Trainer	250 kg land bombs	1	12	30	0	55	Penetration (After action of firing assembly)
2	21 Jul	Shiragiku Utility Trainer	250 kg land bombs	2	12	30	0	53	Same as above
3	24 Jul	Type 9 Fighter	500 kg general purpose bombs	1	12	30	0	55	Same as above
4	28 Jul	Shiragiku Utility Trainer	250 kg land bombs	2	8	60	0	55	Ricochet (After action of firing assembly)
5	3 Aug	Shiragiku Utility Trainer	250 kg land bombs	1	8	0	45	55	Penetration (After action of firing assembly)
6	15 Aug	Type 93 Intermediate Trainer	250 kg land bombs	1	8	60	0	80	Same as above

Chart 8

Results of Ko-Go Tests at Kure Navy Yard

	Warship Used	Type of Bomb Tested	Installation	Results
1	Aso (Medium-Class Aircraft Carrier) (Not completed, had no flight deck Displacement Tonnage at that time was 10,000 tons)	Type 4 Torpedo Warhead (V-Head)	Angle of incidence, 15 deg on the fore lift	Only small holes were caused on both side plates; operation of the warship was hardly affected
2		Type 4 Torpedo Warhead (V-Head)	On the tower whose height is equal to the distance between the shelter deck and the flight deck (in the center of the warship) (Angle of incidence, 45 deg)	The speed remained unchanged and navigation was possible in spite of the damage suffered on the shelter deck and the upper deck
3		500 kg General Purpose Bomb	On the armor deck over the fore magazine room (Angle of incidence, 45 deg)	The armor deck sank and starboard plate was holed 6 m x 12 m Flooding; 2,070 tons
4		V Bomb (800 kg Oka Model 22)	On the lower deck near the after lift (Angle of incidence 45 deg)	Hole 3 m x 7 m was caused on the armor deck. There was no flooding in spite of serious damage
5		Sakura Bomb (Army)	On top of the tower whose height is equal to the distance between the shelter deck and the flight deck. (On the aftermost part of the warship) (Angle of incidence, 20 deg)	Hole at the bottom of the warship was 6.9 m x 8 m Flooding, 150 tons

Summary

1. Effectiveness of the air burst of the Type 4 torpedo head is comparatively small and therefore, its value as a special attack weapon is small.
2. The V bomb had a greater penetration power than does the general purpose bomb. Therefore, it must be prepared immediately and tested for its effectiveness as compared to the general purpose bomb.
3. Although the Sakura bomb might inflict comparatively small damage to a ship, it is recognized that the bomb can inflict fatal damage to a war ship, if it hits, for instance, the magazine room.
4. In general, the penetration bomb can destroy that part of the object in the course of the flame.
   However, it does hardly any damage to parts not on this course.

		Apr	May	Jun	Jul	Aug	Sep	Total
KAIRYU (Midget submarine)		100	95	105	150	150	150	750
KAITEN (Human torpedo)		73	83	93	To be decided later			249
SHINYO (surface craft)	Model 1	300	600	600	600	600	600	3,450
	Model 5	150						

However, because of various successive bottlenecks in the execution of the plan, only approximately half of the plan was realized. Actual production was as shown on Chart 10.

The organization and disposition of surface and underwater special attack units for the decisive battle of the Homeland are shown on the following charts:

Chart 11: Table of Organization of Special Attack Squadrons

Chart 12: Chart Showing the Location of Special Attack Bases

Results of Surface and Underwater Special Attack Weapons Preparation

		Production						Total		Percentage
		April		May		June				
		Completed	Plan	Completed	Plan	Completed	Plan	Completed	Plan	
Submarines (Small)				2	2	2	4	4	6	67
KORYU (Midget submarine)		12	27	12	33	20	50	44	110	40
KAIRYU (Midget submarine)		9	100	42	95	74	105	125	300	42
KAITEN (Human torpedo)		66	73	42	83	51	92	159	249	64
SHINYO (Suicide surface craft)	Type 1	68	300	316	450	284	450	668	1,200	56
	Type 5	181	150	167	150	111	150	459	450	102

Chart 10

Table of Organization of Special Attack Squadrons

Force		Vessels	Attack Units	Other Units
Yokosuka Naval District Force	1st Special Attack Squadron	Destroyer Sawakaze Frigates Amakusa, Shizaka Frigate No 37 Minesweeper No 27 Subchasers Nos 42, 47 & 51 Light Minelayer Kamijima	Yokosuka Attack Unit 11th " " 15th " " 16th " " 18th " " 71st " "	Yokosuka Naval Defense Corps
	7th Special Attack Squadron	Minesweeper No 1 Subchasers Nos 33 & 48	12th Attack Unit 14th " " 17th " "	Onagawa Naval Defense Corps
	4th Special Attack Squadron	Submarine Tender Komahashi Frigates Nos 4, 45 & 50 Subchasers Nos 14 & 44	13th Attack Unit 19th " "	Ise Naval Defense Corps
Kure Naval District Force	2d Special Attack Squadron		Okami Attack Unit Hikari " " Hirao " " Kasado " " 81st " "	
	8th Special Attack Squadron	34th Minesweeper Division	21st Attack Unit 23d " " 24th " "	Saeki Air Group Saeki Naval Defense Corps
Osaka Guard District Force	6th Special Attack Squadron	Frigates Nos 30 & 190 Patrol Boat No 104	22d Attack Unit	Kii Naval Defense Corps

Chart II-a
46

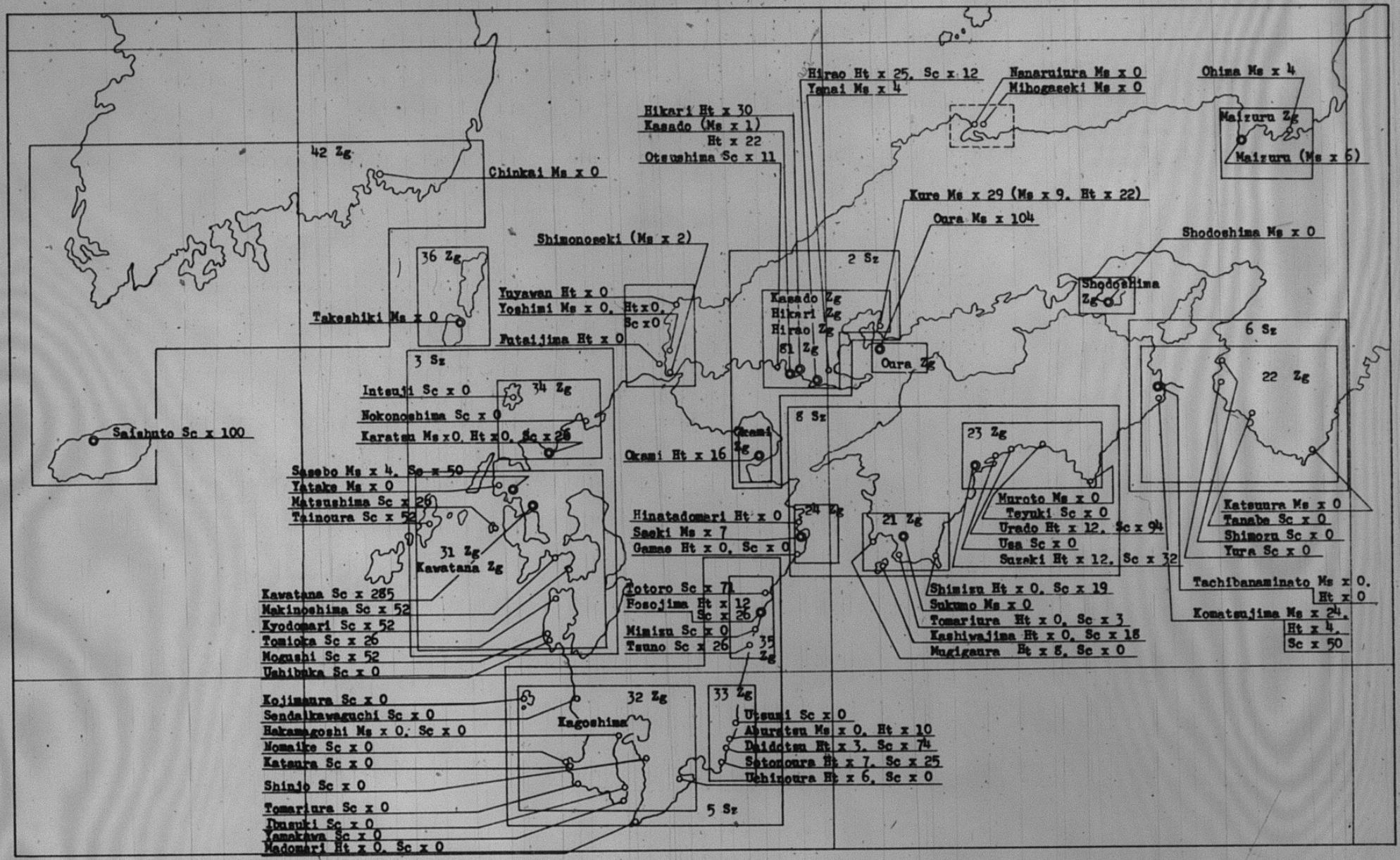
(Cont'd) Table of Organization of Special Attack Squadrons

Force		Vessels	Attack Units	Other Units
Sasebo Naval District Force	3d Special Attack Squadron		Kawadana Attack Unit 31st " " 34th " "	
	5th Special Attack Squadron	Subchaser No 49	32d Attack Unit 33d " " 35th " "	
Maizuru Naval District Force			Maizuru Attack Unit	
Chinkai Guard District Force			42d Attack Unit	
Combined Fleet	10th Special Attack Squadron	Submarine HA-109 Submarine HA-111	101st Attack Unit 102d " " Oura " " Shozushima Attack Unit	
Seventh Fleet			36th Attack Unit	

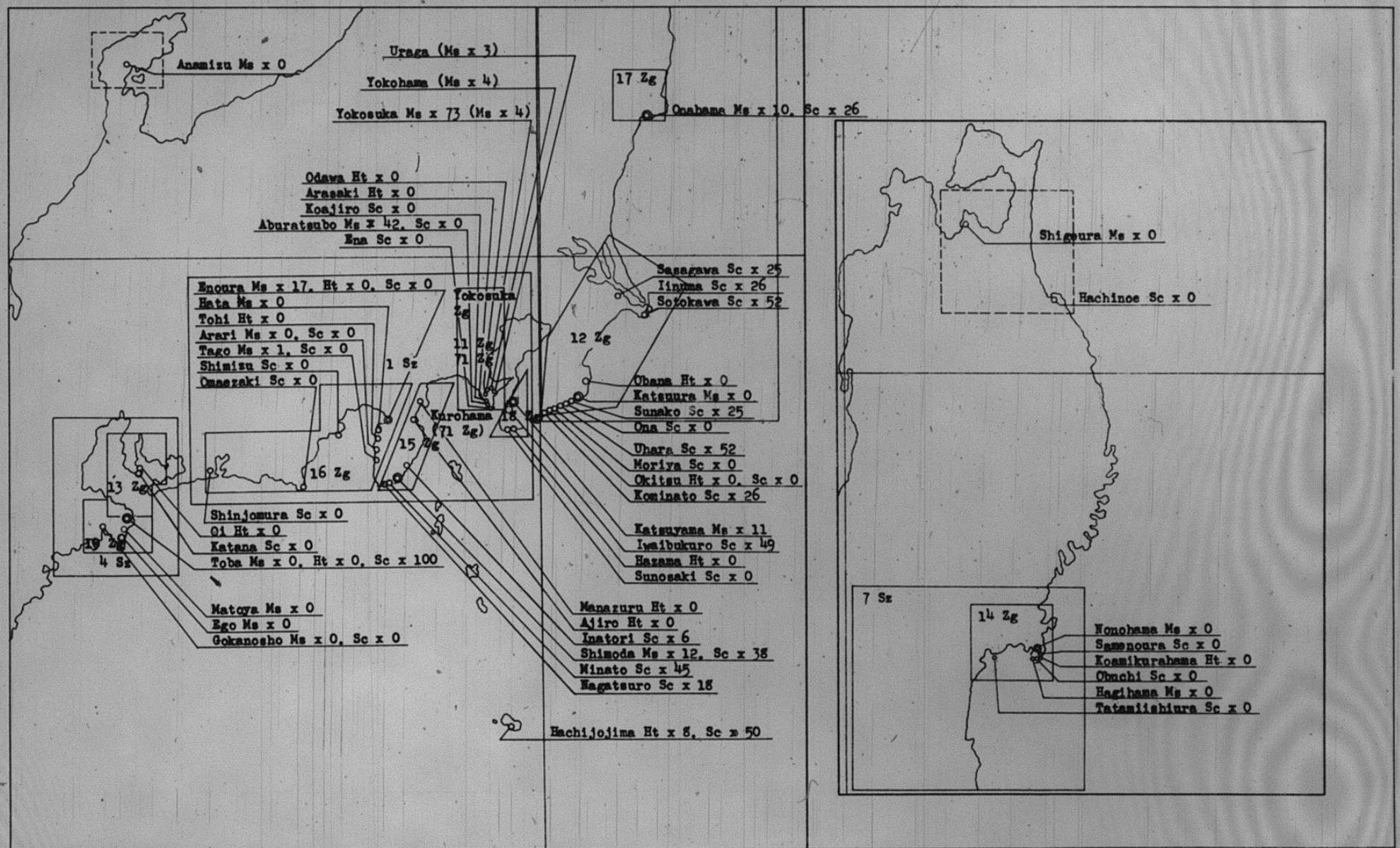
Chart 11-b
47

Location of Special Attack Bases
15 August 1945

Chart 12-a
48



Location of Special Attack Bases
15 August 1945



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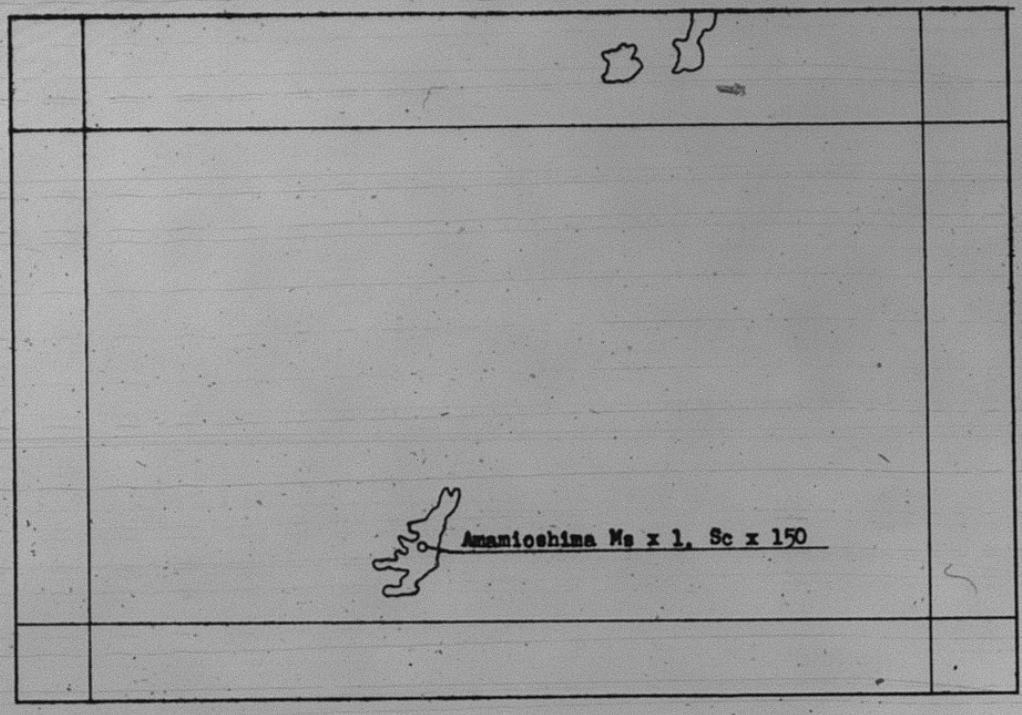
Location of Special Attack Bases
15 August 1945

Chart 12-c



LEGEND

◎ ---- Main Base of Special Attack Unit

○ ---- Base

▭ ---- Boundry of Unit or Squadron

Sz ---- Special Attack Squadron

Zg ---- Special Attack Unit

Ms ---- Midget Submarine

Ht ---- Human Torpedo

Sc ---- Surface Crashing Craft

(Symbol x No)-- Strength used for Training

▭ ---- Special Attack Unit to be activated

Bonin Is ..... Sc 91

Formosa ..... Sc about 300

ChuShantao Is ..... Sc about 100

Miyako Is ..... Sc about 200

APPENDIX I

Major Naval Arms and Weapons Produced from January 1944 to Cessation of Hostilities

Naval Craft Completed After January 1944 (Number and Displacement)

Type of Naval Craft	Class and Displacement	1944												1945								Incomplete
		First Quarter			Second Quarter			Third Quarter			Fourth Quarter			First Quarter			Second Quarter			Third Quarter		
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	
Aircraft Carrier	No 110 Class 62,000											1 62,000										
	Taiho Class 30,360			1 (TN Number of craft) 30,360 (TN Displacement)																		
	Unryu Class 17,500								2 35,000		1 17,500											1 17,500
	Unryu Class 17,460																					1 17,460
	Unryu Class 17,260																					1 17,260
	Ibuki Class 12,500																					1 12,500
	Monthly total			1 30,360					2 35,000		1 17,500	1 62,000										4 64,720
	Quarterly total		1 30,360						2 35,000			2 79,500										4 64,720
Cruiser	Agano Class 6,500											1 6,500										
	Quarterly total											1 6,500										
Destroyer	Yugumo Class 2,040		1 2,040	1 2,040		1 2,040																
	Akizuki Class 2,700			1 2,700		1 2,700							2 5,400	1 2,700			1 2,700					
	Matsu Class 1,260				1 1,260		3 3,780	1 1,260	3 3,780	4 5,040	1 1,260	3 3,780	1 1,260	3 3,780	1 1,260	6 7,560	1 1,260	3 3,780	1 1,260			4 5,040
	Monthly total		1 2,040	2 4,740	1 1,260	2 4,740	3 3,780	1 1,260	3 3,780	4 5,040	1 1,260	3 3,780	3 6,660	4 6,480	1 1,260	6 7,560	2 3,960	3 3,780	1 1,260			4 5,040
	Quarterly total		3 6,780			6 9,780			8 10,080			7 11,700			11 15,300			6 9,000				4 5,040
Submarine	L-400 Class 3,430												1 3,430	1 3,430						1 3,430		1 3,430
	L-351 Class 2,650													1 2,650								1 2,650
	L-13 Class 2,400												1 2,400			1 2,400						1 2,400
	L-1 Class 2,390																					1 2,390
	L-16 Class 2,180		1 2,180					1 2,180		1 2,180												
	L-15 Class 1,950	1 1,950																				

Appended Chart 1-a

Naval Craft Completed After January 1944 (Number and Displacement)

Type of Naval Craft	Class and Displacement	1944												1945								Incomplete
		First Quarter			Second Quarter			Third Quarter			Fourth Quarter			First Quarter			Second Quarter			Third Quarter		
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	
Submarine	L-52 Class 2,100		1 2,100		1 2,100																	
	L-54 Class 1,950			1 1,950			1 1,950			1 1,950												
	L-361 Class 1,470					2 2,940	1 1,470	1 1,470	4 5,880	1 1,470	2 2,940											
	L-372 Class 1,660											1 1,660					1 1,660					1 1,660
	L-201 Class 1,000														2 2,000				1 1,000			5 5,000
	RO-35 Class 965	2 1,930	1 965	1 965		1 965		1 965		1 965		1 965										
	RO-100 Class 429	2 858																				
	HA-101 Class 370											1 370	3 1,110		3 1,110	1 370		1 370		1 370		2 740
	HA-201 Class 320																	2 640	2 640	1 320	5 1,600	22 7,040
	L-12 Class 2,200					1 2,200																
	Monthly total	5 4,738	3 5,245	2 2,915	1 2,100	4 6,105	2 3,420	3 4,615	4 5,880	4 6,565	2 2,940	3 2,995	5 6,940	2 6,080	5 3,110	2 2,770	1 1,660	3 1,010	3 1,640	3 4,120	5 1,600	34 25,310
	Quarterly total		10 12,898			7 11,625			11 17,060			10 12,875			9 11,960			7 4,310			8 5,720	34 25,310
Minelayer	Minomo Class 3,000																				1 3,000	
	Quarterly total																			1 3,000		
Frigate	Etorofu Class 870		1 870																			
	Mikura Class 940	1 940	2 1,880		1 940	2 1,880	2 1,880	2 1,880	1 940	1 940	3 2,820		5 4,700	3 2,820	3 2,820	4 3,760	4 3,760			1 940		4 3,760
	No 1 Class 750		2 1,500	4 3,000	4 3,000			4 3,000	3 2,250	4 3,000	5 3,750	5 3,750	5 3,750	2 1,500	3 2,250	2 1,500	3 2,250	4 3,000	1 750	2 1,500		4 3,000
	No 2 Class 740		3 2,220	9 6,660	1 740	2 1,480	2 1,480		5 3,700	5 3,700	6 4,440	4 2,960	7 5,180	3 2,220	5 3,700	6 4,440	2 1,480			2 1,480	1 740	5 3,700
	Monthly total	1 940	8 6,470	13 9,660	6 4,680	4 3,360	4 3,360	6 4,880	9 6,890	10 7,640	14 11,010	9 6,710	17 13,630	8 6,540	11 8,770	12 9,700	9 7,490	4 3,000	1 750	5 3,920	1 740	13 10,460
	Quarterly total		22 17,070			14 11,400			25 19,410			40 31,350			31 25,010			14 11,240			6 4,660	13 10,460
Naval Transport	No 1 Class (TM APDI) 1,500			1 1,500			3 4,500		3 4,500	3 4,500		3 4,500	3 4,500		2 3,000		1 1,500	1 1,500		1 1,500		1 1,500
	No 101 Class (TM LSMI) 890		2 1,780	4 3,560	2 1,780	3 2,670	4 3,560	4 3,560	3 2,670	12 10,680	5 4,450	3 2,670	1 890	3 2,670		1 890	1 890			1 890		4 3,560

Appended Chart 1-b (Cont'd)

Naval Craft Completed After January 1944 (Number and Displacement)

Type of Naval Craft	Class and Displacement	1944												1945								Incomplete
		First Quarter			Second Quarter			Third Quarter			Fourth Quarter			First Quarter			Second Quarter			Third Quarter		
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	
Naval Transport	Monthly total		2 1,780	5 5,060	2 1,780	3 2,670	7 8,060	4 3,560	6 7,170	15 15,180	5 4,450	6 7,170	4 5,390	3 2,670	2 3,000	1 890	2 2,390	1 1,500		2 2,390		5 5,060
	Quarterly total		7 6,840			12 12,510			25 25,910			15 17,010			6 6,560			3 3,890		2 2,390		5 5,060
Mine-sweeper	No 19 Class 630		1 630			2 1,260	1 630	1 630														
	Quarterly total		1 630			3 1,890			1 630													
Subchaser	No 13 Class 440	2 880		3 1,320		1 440	1 440	1 440			1 440											
	Quarterly total		5 2,200			2 880			1 440			1 440										
Light Minelayer	Ajiro Class 720							1 720														
	Kamishima Class 766																			1 766		1 766
	Monthly total							1 720												1 766		1 766
	Quarterly total								1 720											1 766		1 766
Special Duty Ship	Hario Class (AO) 18,500												1 18,500									
	Ohsima Class (target ship) 2,670													1 2,670								1 2,670
	Monthly total												1 18,500	1 2,670								1 2,670
	Quarterly total											1 18,500			1 2,670							1 2,670
Auxiliary Patrol Vessel	No 1 Class 238														2 476	4 952	2 476	6 1,428	4 952	5 1,190	4 952	26 6,188
	Quarterly total														6 1,428			12 2,855			9 2,142	26 6,188
Auxiliary Subchaser	No 1 Class 130	4 520	8 1,040	9 1,170	6 780	9 1,170	10 1,300	13 1,690	12 1,560	10 1,300	11 1,430	14 1,820	7 910	5 650								
	Quarterly total		21 2,730			25 3,250			35 4,500			32 4,160			5 650							
Monthly total		12 7,078	23 17,205	35 55,225	16 10,600	25 19,745	28 20,990	30 17,795	36 60,280	43 35,725	35 39,030	37 90,975	37 52,030	23 25,090	21 16,616	25 21,872	16 15,976	17 10,118	9 4,602	16 12,386	11 6,292	88 120,214
Quarterly total			70 79,508			69 51,335			109 113,800			109 182,035			69 63,518			42 31,296		27 18,678		88 120,214

Remarks: The naval craft listed as incomplete refer to these not yet completed at the end of war and also those whose construction was suspended during the war.

Appended Chart 1-C(Cont'd)

Transports and Freighters Completed After January 1944

Year	Month	Quarter	Freighter		Tanker		Others		Monthly total		Quarterly total	
			No	Tonnage	No	Tonnage	No	Tonnage	No	Tonnage	No	Tonnage
1944	Jan	First Quarter	28	56,520	11	36,470	3	15,250	42	108,240	203	514,840
	Feb		45	89,100	13	38,370			58	127,470		
	Mar		72	183,430	27	89,570	4	6,130	103	279,130		
	Apr	Second Quarter	34	72,590	8	6,960			42	79,550	161	370,610
	May		40	82,180	19	61,110	3	2,000	62	145,290		
	Jun		40	97,650	17	48,120			57	145,770		
	Jul	Third Quarter	33	50,620	17	55,270	3	2,000	53	107,890	180	398,470
	Aug		39	38,820	24	71,890			57	110,710		
	Sep		40	52,050	29	127,320	1	500	70	179,870		
	Oct	Fourth Quarter	40	48,830	23	97,200	1	500	64	146,530	189	418,990
	Nov		40	59,720	24	77,280	1	900	65	138,100		
	Dec		41	76,810	18	57,050	1	500	60	134,360		
1945	Jan	First Quarter	31	63,170	16	51,000	3	10,500	50	124,670	130	386,320
	Feb		36	101,930	12	50,920			48	152,850		
	Mar		27	85,080	3	13,720	2	10,000	32	108,800		
	Apr	Second Quarter	12	23,180			1	500	13	23,680	41	128,550
	May		19	63,470			1	500	20	63,970		
	Jun		8	40,900					8	40,900		
	Jul	Third Quarter	11	36,580					11	36,580	18	56,401
	Aug		7	19,821					7	19,821		

Appended Chart 2

Aircraft Produced January 1944 - August 1945

Item	Type of Aircraft		1944 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Standard Planes	Carrier-borne fighters	1	363	269	362	339	327	300	278	367	224
				994			966			889	
	Intercepters	2	35	67	75	117	58	116	127	117	125
				177			291			369	
	Night fighters	3	25	18	18	35	40	40	27	35	40
				61			115			102	
	Carrier-borne bombers	4	140	147	141	125	133	118	107	106	122
				428			376			335	
	Carrier-borne attack bombers	5	30	25	39	36	36	57	79	85	76
				94			129			240	
	Land-based reconnaissance planes	6	1	2	6	6	0	1	4	8	19
				9			7			31	
	Land-based bombers	7	11	20	35	46	46	51	47	48	69
				66			143			164	
	Land-based attack bombers	8	53	46	50	73	70	79	89	85	91
				149			222			265	
	Patrol planes	9	1	1	2	1	2	3	3	3	3
				4			6			9	
	Land-based transport planes	10	8	14	15	3	3	17	14	16	19
				37			23			49	
	Seaplane fighters	11	9	10	10	0	0	0	0	0	0
				29			0			0	
	Reconnaissance seaplanes	12	51	49	51	53	53	62	52	59	40
				151			168			151	

Aircraft Produced January 1944 - August 1945

	1944			1945								Japanese Designation of Aircraft (Factory)
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	
1	339	360	268	251	167	247	267	285	208	153	101	Type-0 fighter (Nakajima and Mitsubishi)
	967			665			760			254		
2	129	121	95	89	97	140	128	101	56	44	8	Shiden (Kawanishi and Showa). Raiden (Mitsubishi)
	345			326			285			52		
3	23	0	0	0	0	0	0	0	0	0	0	Gekko (Nakajima)
	23			0			0			0		
4	116	133	150	115	98	101	96	46	67	33	4	Suisei (Aichi and 11th Naval Air Depot) Type-99 (Aichi and Showa)
	399			314			209			37		
5	96	87	60	75	83	94	65	12	42	13	1	Tenzan (Nakajima). Ryusei (Aichi and 21st Naval Air Depot)
	243			252			119			14		
6	25	26	25	30	38	64	60	58	47	35	4	Saiun (Nakajima)
	76			132			165			39		
7	75	88	84	90	52	52	63	64	53	40	20	Ginga (Nakajima and Kawanishi)
	247			194			180			60		
8	109	108	60	55	60	50	65	31	25	1	0	Type-1 (Mitsubishi)
	277			165			121			1		
9	8	11	14	16	11	13	13	15	12	12	6	Tokai (Kyushu)
	33			40			40			18		
10	20	16	17	19	9	21	15	14	3	7	1	Type-0 (Showa)
	53			49			32			8		
11	0	0	0	0	0	0	0	0	0	0	0	Kyofu (Kawanishi)
	0			0			0			0		
12	61	70	73	49	47	32	22	16	11	4	4	Type-0 (Kyushu) Zuiun (Nippon Hikoki and Aichi)
	204			128			49			8		

Aircraft Produced January 1944 - August 1945

Item	Type of Aircraft		Year / Month	1944								
				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Standard Planes	Observation planes	1		50	40	35	30	35	30	15	6	0
				125			95			21		
	Seaplane bombers	2		0	1	0	0	0	2	1	1	1
				1			2			3		
	Flying boats	3		9	9	10	9	8	8	5	3	3
				28			25			11		
	Total of combat aircrafts	4		786	718	849	873	811	884	848	939	852
				2,353			2,568			2,639		
	Trainer	5		212	223	281	297	281	278	262	212	147
				716			856			621		
	Total	6		998	941	1,130	1,170	1,092	1,152	1,110	1,151	999
				3,069			3,424			3,260		
Special-Type Planes	Oka, Model 11	7										10
											10	
	Oka, Model 22	8										
	Shusui	9										
	Kikka	10										
	Total	11										10
											10	
Grand Total		12		998	941	1,130	1,170	1,092	1,162	1,110	1,151	1,009
				3,069			3,424			3,270		

Aircraft Produced January 1944 - August 1945

	1945											Japanese Designation of Aircraft (Factory)
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	
1	0	0	0	0	0	0	0	0	0	0	0	Type-0 (21st Naval Air depot)
	0			0			0			0		
2	2	1	1	1	2	2	2	4	2	3	0	Seiran (Aichi)
	4			5			8			3		
3	3	4	6	4	2	2	3	0	0	0	0	Type-2, Soku (Kawanishi)
	13			8			3			0		
4	1,006	1,025	853	794	666	818	799	646	526	345	149	Type-0 training fighter (Hitachi) Shiragiku (Kyushu) Type-93 intermediate trainer (Fuki and Nippon Hikoki)
	2,884			2,278			1,971			494		
5	153	123	132	157	154	158	86	89	72	63	68	
	408			469			247			131		
6	1,159	1,148	985	951	820	976	885	735	598	408	217	
	3,292			2,747			2,218			625		
7	50	95	93	160	197	150						(1st Air Technical Depot)
	238			507								
8									50			(1st Air Technical Depot)
							50					
9						1				4		(Mitsubishi and Nippon Hikoki)
				1						4		
10									1			(Nakajima)
							1					
11	50	95	93	160	197	151			51	4		
	238			508			51			4		
12	1,209	1,243	1,078	1,111	1,017	1,127	885	735	649	412	217	
	3,530			3,255			2,269			629		

Guns and Ammunition Produced January 1944 - August 1945

Weapons and Ammunition	Type of Guns	Caliber		1944 First Quarter Jan	Feb	Mar
Guns	Flat	220 mm	1	3	2	1
				6		
		140 mm	2	1	1	1
				3		
		127 mm	3	6	6	6
				18		
		200 mm short barrel and 120 mm	4	33	51	46
				130		
		Miscellaneous	5	2	3	2
				7		
		Total	6	45	63	56
				164		
	Dual purpose guns	127 mm	7	30	30	30
				90		
		120 mm	8	62	81	95
				238		
		100 mm	9	8	12	2
				22		
		80 mm	10	8	2	8
				18		
		Total	11	108	125	135
				368		
	Total		12	153	188	191
				532		
Automatic cannon and Machine gun	Machine guns	30 mm	13	15	5	5
				25		

Guns and Ammunition Produced January 1944 - August 1945

	1944								
	Second Quarter			Third Quarter			Fourth Quarter		
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	2	1	2	1	2	1	1	1	1
	5			4			3		
2	1	1	1	1	1	1	1	1	1
	3			3			3		
3	1	1	0	0	1	0	0	1	0
	2			1			1		
4	50	50	50	60	60	60	50	40	30
	150			180			120		
5	3	3	3	3	3	3	3	3	3
	9			9			9		
6	57	56	56	65	67	65	55	46	35
	169			197			136		
7	30	30	30	30	30	30	30	30	20
	90			90			80		
8	100	120	150	140	180	200	200	180	130
	370			520			510		
9	4	4	4	4	4	3	4	4	4
	12			11			12		
10	5	6	5	5	5	5	5	5	5
	16			15			15		
11	139	160	189	179	219	238	239	219	159
	488			636			617		
12	196	216	245	244	286	303	294	265	194
	657			833			753		
13	15	20	0	10	15	20	0	25	15
	35			45			40		

Guns and Ammunition Produced January 1944 - August 1945

	1945							
	First Quarter			Second Quarter			Third Quarter	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
1	1	1	1	0	0	0	0	0
	3			0			0	
2	1	1	1	0	0	0	0	0
	3			0			0	
3	0	1	0	0	0	0	0	0
	1			0			0	
4	30	30	20	20	10	5	5	0
	80			35			5	
5	3	3	3	1	1	1	0	0
	9			3			0	
6	35	36	25	21	11	6	5	0
	96			38			5	
7	15	15	10	10	15	10	10	5
	40			35			15	
8	110	100	90	80	60	40	5	0
	300			180			5	
9	4	1	0	4	3	2	1	0
	5			9			1	
10	5	5	5	4	3	2	1	0
	15			9			1	
11	134	121	105	98	81	54	17	5
	360			233			22	
12	169	157	130	119	92	60	22	5
	456			271			27	
13	70	110	350	500	350	460	500	140
	530			1,310			640	

Guns and Ammunition Produced January 1944 - August 1945

Weapons and Ammunition	Type of Guns	Caliber		1944		
				First Quarter		
				Jan	Feb	Mar
Automatic cannon and machine guns	Machine guns	25 mm	1	800	1,000	1,000
				2,800		
		20 mm	2	770	1,195	1,710
				3,675		
		13 mm	3	600	740	780
				2,120		
		7.9 mm and 7.7 mm	4	1,475	1,710	1,825
				5,010		
		Total	5	3,660	4,650	5,320
				13,630		
Ammunitions	For flat guns	20 mm and above	6	1,000	1,000	1,000
				3,000		
		155 mm and below	7	21,000	20,000	20,000
				61,000		
		Total	8	22,000	21,000	21,000
				64,000		
	For dual purpose gun		9	30,000	30,000	30,000
				90,000		
	Total for flat and dual purpose guns		10	52,000	51,000	51,000
				154,000		
	For automatic cannon and machine gun (thousand of rounds)		11	10,860	12,008	15,395
				38,263		

Guns and Ammunition Produced January - August 1945

	1944								
	Second Quarter			Third Quarter			Fourth Quarter		
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1,500	1,700	1,700	2,000	2,000	2,000	2,200	2,200	2,000
	4,900			6,000			6,200		
2	1,240	1,520	2,340	2,340	3,375	3,080	3,660	3,830	3,490
	5,100			8,795			10,980		
3	900	1,000	1,150	1,080	1,300	1,320	1,455	1,605	1,590
	3,050			3,700			4,650		
4	1,430	1,545	1,550	1,685	1,265	1,210	1,500	1,195	1,030
	4,525			4,160			3,725		
5	5,085	5,785	6,740	7,115	7,955	7,630	8,815	8,655	8,125
	17,610			22,700			25,595		
6	1,000	1,200	800	500	500	500	500	0	0
	3,000			1,500			500		
7	15,000	10,000	10,000	5,000	5,000	5,000	3,000	2,000	0
	35,000			15,000			5,000		
8	16,000	11,200	10,000	5,500	5,500	5,500	3,500	2,000	0
	38,000			16,500			5,500		
9	30,000	40,000	40,000	40,000	40,000	50,000	50,000	60,000	60,000
	110,000			130,000			170,00		
10	45,000	51,200	50,800	45,000	45,500	55,500	53,500	62,000	60,000
	148,000			146,500			175,500		
11	13,543	13,390	12,306	12,728	12,210	11,193	11,391	11,466	10,419
	39,239			36,131			33,276		

Guns and Ammunition Produced January 1944 - August 1945 64

	1945							
	First Quarter			Second Quarter			Third Quarter	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
1	1,800	1,600	500	800	800	500	400	100
	3,900			2,100			500	
2	3,195	1,695	1,855	1,405	1,435	1,625	785	400
	6,745			4,465			1,185	
3	1,755	2,040	1,905	1,685	1,545	1,330	1,205	375
	5,700			4,560			1,580	
4	1,140	805	1,245	1,010	1,110	785	740	310
	3,190			2,905			1,050	
5	7,960	6,250	5,855	5,400	5,240	4,700	3,630	1,325
	20,065			15,340			4,955	
6	0	0	0	0	0	0	0	0
	0			0			0	
7	0	0	0	0	0	0	0	0
	0			0			0	
8	0	0	0	0	0	0	0	0
	0			0			0	
9	40,000	35,000	10,000	30,000	20,000	20,000	10,000	5,000
	85,000			70,000			15,000	
10	40,000	35,000	10,000	30,000	20,000	20,000	10,000	5,000
	85,000			70,000			15,000	
11	10,068	10,114	11,441	11,240	11,087	8,013	5,738	3,446
	31,623			30,340			9,184	

Remarks:
The guns listed here are those produced for naval craft, aircraft and naval land bases and do not include guns for land mobile combat use. However, the automatic cannon and machine guns and the ammunition to include those for land mobile combat use.

Land Mobile Combat Weapons Produced January - 1944 - August 1945

Gun and Ammunition \ Year / Quarter and Month	1944	1945				
			Second Quarter			
	Jan to Dec	Jan to Mar	Apr	May	Jun	Jul to Aug
120 mm gun, short barrel, for land mobile combat	Unknown	Unknown	5	29	0	Unknown
			34			
Ammunition for 120 mm short barrel, for land mobile combat	"	"	5,800	4,700	3,000	"
			13,500			
80 mm mortar	"	"	393	345	200	"
			938			
Ammunition for 80 mm mortar	"	"	37,000	37,000	70,000	"
			144,000			
200mm rocket gun	"	"	50	10	190	"
			250			
100 mm antitank gun (rocket type)	"	"	0	5	50	"
			55			
80 mm antitank gun (rocket type)	"	"	210	60	345	"
			615			
Ordinary rocket shell	"	"	2,500	3,400	5,500	"
			11,400			
Antitank rocket shell	"	"	1,000	500	500	"
			2,000			
Hand grenade	"	"	15,000	85,000	300,000	"
			400,000			

Remarks:

1. The weapons listed here are those for land mobile combat.
2. Since records for months other than April, May and June of 1945 are not available, nothing definite is known.
3. Land mobile combat weapons, other than those listed here, are chiefly rifles and pistols transferred from the Army, but their number is unknown because of a lack of records.
4. Re vehicular weapons, tanks were chiefly transferred from the Army and the rest were appropriated by the Munitions Ministry. Their number also is unknown.

Gunpowder Produced After January 1944 (Quantity in Kilograms)

Year and Month	Quarter	Powder for Guns		Powder for Machine Guns		Propellants		Explosives		Total	
1944 Jan	First Quarter	464	1,351	233	746	8	25	1,937	6,187	2,642	8,309
Feb		474		233		7		2,061		2,775	
Mar		413		280		10		2,189		2,892	
Apr	Second Quarter	452	1,426	347	1,002	59	194	2,156	6,803	3,014	9,425
May		487		335		65		2,297		3,184	
Jun		487		320		70		2,350		3,227	
Jul	Third Quarter	487	1,423	319	1,000	70	249	2,451	7,512	3,327	10,184
Aug		466		330		89		2,412		3,297	
Sep		470		351		90		2,649		3,560	
Oct	Fourth Quarter	444	1,318	355	1,079	116	336	2,632	7,902	3,547	10,635
Nov		452		354		110		2,697		3,613	
Dec		422		370		110		2,573		3,475	
1945 Jan	First Quarter	422	1,286	420	1,220	145	508	2,489	7,789	3,476	10,803
Feb		422		420		164		2,520		3,526	
Mar		442		380		199		2,780		3,801	
Apr	Second Quarter	317	930	155	688	262	818	1,907	6,220	2,641	8,656
May		319		236		279		2,538		3,372	
Jun		294		297		277		1,775		2,643	
Jul	Third Quarter	229	343	142	193	170	237	1,281	1,927	1,822	2,700
Aug		114		51		67.		646		878	

Appended Chart 6

Fuel Produced After January 1944

Year and Month		Quarter	Item: Aviation Gasoline (Kilograms)		Item: Heavy Oil (Tons)	
1944	Jan	First Quarter	18,000	56,000	29,000	83,000
	Feb		21,000		29,000	
	Mar		17,000		25,000	
	Apr	Second Quarter	20,000	60,000	25,000	80,000
	May		20,000		27,000	
	Jun		20,000		28,000	
	Jul	Third Quarter	19,000	49,000	28,000	75,000
	Aug		15,000		25,000	
	Sep		15,000		22,000	
	Oct	Fourth Quarter	15,000	49,000	22,000	71,000
	Nov		19,000		29,000	
	Dec		15,000		20,000	
1945	Jan	First Qquarter	14,000	34,000	18,000	58,000
	Feb		13,000		19,000	
	Mar		7,000		21,000	
	Apr	Second Quarter	8,000	17,000	20,000	59,000
	May		3,000		19,000	
	Jun		6,000		20,000	
	Jul	Third Quarter	7,000	10,000	11,000	15,000
	Aug		3,000		4,000	

Appendix II

Agreement Between the Army and the Navy Concerning War Preparations for the First Half of Fiscal Year 1945

Army General Staff

Navy General Staff

1 April 1945

Deputy Chief, Army General Staff

Vice-Chief, Navy General Staff

I. General Principles

The war preparations of the Army and the Navy for the first half of the fiscal year 1945 will be accomplished in accordance with the following principles:

1. Priority will be given to the equipment of the Air Forces and the Special Attack Forces. Of the Army land forces (operational forces, including the 40 newly-organized divisions) and the Navy forces (excluding Air Force and Special Attack Forces), those which can be relied upon to display fighting power to repel the enemy during the decisive battle for the Homeland will be provided promptly with sufficient equipment. War preparations for the defense of surface communications routes will be restricted to a minimum, while other preparations will be executed in consonance with national power and within a limit which will not affect major war preparations.

2. Efforts will be made by both the Army and the Navy to cooperate in their war preparations. In exchanging assistance, the Army will facilitate the Navy's procurement of aircraft and special underwater attack

weapons for attacking enemy task forces. The Navy will assist the Army in its procurement of aircraft and ground weapons to be used in the local air defense of the Homeland.

3. The Supreme Command will maintain close contact with the Government and extend all-out support and cooperation to the latter in concentrating the resources of the entire nation for war purposes, as well as in building up such war preparations.

4. The planning of Army and Navy war preparations, (items, quantities, priority, et cetera) will be based on the principles enumerated herein and implementation of such plans will be carried out with a view to adequate realization of such plans.

II. Essentials of the Goal for Army and Navy War Preparations

1. The order of priority in war preparations by the Army and Navy will be as follows:

a. Aircraft and special attack weapons

(1) Aircraft and special air attack weapons. The position on the priority list to be determined separately.

(2) Underwater and special surface attack craft.

(a) Koryu midget submarines and small submarines.

(b) Kairyu midget submarines.

(c) Kaiten human torpedoes.

(d) Shin-yo crash boats.

(3) A minimum number of simple base installations required for operating the above.

b. Ground weapons.

(1) Antitank weapons.

(2) Weapons for use against heavy weapons, landing craft and large caliber machine guns.

(3) Close-range automatic weapons and anti-aircraft guns.

(4) A minimum number of simple ground combat fortifications required for operating the above.

c. Naval craft and weapons for severing the enemy's rear lines and for protecting friendly surface communications lines.

(1) Submarines.

(2) Light minelayers and mines.

(3) Coastal defense craft and depth charges.

(4) Frigates.

d. Transports

(1) Navy transports.

(2) Large landing barges.

e. Fortifications and installations

(1) Base for general aircraft and special attack aircraft.

(2) General preparations for land combat.

f. Other items (clothing, materiel, medical and veterinary supplies)

Minimum requirements proportionate to Army and Navy strength estimated for September 1945.

To secure the necessary provisions, every possible measure

will be taken with the nation's food supply taken into consideration. The Army and Navy will collaborate in providing various types of fuel and ammunition in the maximum quantity and in such proportion as to meet the requirements of the different weapons. Maximum efforts will be made in making preparations for chemical warfare. The essentials of this measure will be prescribed in a separate agreement.

2. Essentials concerning procurement and distribution of the principal weapons to the Army and the Navy for the first half of fiscal year 1945 will be determined in accordance with Charts 1 through 7.

The Number of Aircraft to be Made Available During the First Half of Fiscal Year 1945

Outline of Plan

1. In procuring aircraft, the Army will give top priority to those planes which can be used for attacking enemy vessels, especially transports, and for defending strategic points of the Homeland; the Navy will place the greatest emphasis upon the procurement of those planes which can be used against hostile carrier task forces for the retention of air and sea superiority.

2. Both the Army and the Navy will convert all their planes into special attack planes, procure high priority aircraft and make every effort to ready the various types of aircraft by the middle of the current fiscal year.

3. To meet the minimum operational requirements, the Army and the Navy will each procure more than 1,200 front-line planes a month. They will cooperate with each other to facilitate dispersion and transfer underground production facilities.

Classification	Type of Aircraft		* Minimum Requirements	Production Goal
Army Aircraft	Fighter	Type I fighter	1,390	1,600
		Type IV fighter	2,500	3,000
		KI - 100 fighter	1,200	1,500
		KI - 102 fighter**	300	500
		Type III fighter		300
		Total	5,390	6,900
	Bomber	Type IV bomber	700	1,200
		KI - 74 bomber	50	150
		Total	750	1,350
	Hq Recon Plane	Type 100 Hq recon plane	500	800
	Transport Plane	KI - 54 (or KI - 110) transport plane	100	150

Chart 1-a

(Cont'd)

The Number of Aircraft to be Made Available During the First Half of Fiscal Year

Classification	Type of Aircraft		* Minimum Requirement	Production Goal
Army Aircraft	Transport Plane	Type 100 transport plane		100
		KI - 105 transport plane		50
		Total	100	150
	Trainer	KI - 54 (or KI - 110) trainer		100
		Type II advanced trainer		300
		Type IV trainer		250
		Total		650
	Grand Total		6,740	10,000
Navy Aircraft	Fighter	Shiden-Kai	2,400	2,400
		Zero fighter	1,800	2,700
		Kaiden-Kai		600
		Saiun	300	300
		Ginga	100	100
		Total	4,600	6,100
	Reconnaissance Plane Saiun		850	850
	Attack Plane	Ginga	700	700
		Ryusei	300	300
		Renzan	50	100
		Total	1,050	1,100
	Patrol Plane	Type I land-based attack plane	240	250
		Tokai ***		250
		Total		500

Chart 1-b

(Cont'd)

The Number of Aircraft to be Made Available During the First Half of Fiscal Year 1945

Classification	Type of Aircraft		* Minimum Requirements	Production Goal
Navy Aircraft	Sea Reconnaissance Plane "Seiran"			80
	Type I Transport Plane Type Zero Transport Plane			320
	Trainer	Land-based medium trainer		200
		Utility trainer		200
		Zero training fighter		350
		Type 99 training bomber		100
		Tokai trainer		200
		Total		1,050
Grand Total			6,740	10,000

Notes: * Number of planes to be procured by all means. Most of the planes to be produced at dispersed, underground facilities.

** Types of KI - 102 fighters that must be acquired by any means are the Type A and C.

*** Type I land-based attack planes will also be used as torpedo bombers.

List of Special Attack Weapons to be Produced During the First Half of 1945 Fiscal Year

Weapons	Apr	May	Jun	Jul	Aug	Sep	Total	Responsibility for Procurement (The one marked "*" will be mainly responsible)	Remarks
"KI" 115 Special Attack Plane	50	150	300	400	500	600	2,000	Army	
Special Type Plane	2,000							Navy	
Oka	300	300	300	300	300	300	1,800	Navy	
Koryu Midget Submarine	35	35	50	100	150	180	540	Navy	
Kairyu Midget Submarine	100	120	130	150	200	200	900	Navy	Maximum efforts will be made to increase production
Kaiten Human Torpedo	100	100	100	110	120	120	650	Navy	
Small Submarine		1	5	8	13	13	40	Navy	
Shusui	100	150	200	200	250	300	1,200	* Army Navy	To be allocated equally to the Army and the Navy

75
Chart 2-a

Weapons	Apr	May	Jun	Jul	Aug	Sep	Total	Responsibility for Procurement (The one marked "*" will be mainly responsible)	Remarks
Shinyo Navy Crash Boat	600	600	600	600	600	600	3,600	Army * Navy	
Maruhachi Army Crash Boat			500	500	1,000	1,000	3,000	Army	
Fu Go Bomb carrying Balloon				1,000	1,000	1,000	3,000	Army	

Notes

1. In addition to the weapons mentioned in this table, 10,000 "Ke" rocket bombs, 1,000 "I Go" bombs and 300 "Kikka" suicide attack planes are scheduled to be procured during the first half of the current fiscal year. But the decision relative to their procurement will depend upon the results of research and examination.

2. Procurement of other weapons now under consideration will be determined and added to this table after the research results are made available.

Quantity of Land Combat Weapons to be Produced During the First Half of Fiscal Year 1945

Part 1. Firearms and Guns

Classification of Weapons	Quantity to be Procured	Distribution	Responsibility for Procurement (The one marked "*" will be mainly responsible)
Model 99 Rifle	540,000	Army 440,000 Navy 100,000	* Army Navy
Sub-machine Gun	6,200	Army	Army
Pistol	26,000	Army 19,000 Navy 7,000	Army 24,000 Navy 2,000
Heavy Grenade Discharger	20,500	Army 18,000 Navy 2,500	Army 18,000 Navy 2,500
Light Machine Gun	10,300	Army	Army
Heavy Machine Gun	4,200	Army 3,500 Navy 700	Army 3,000 Navy 1,200
Battalion Gun	1,050	Army	Army
"Rota" Rocket Launcher	23,500	Army 13,500 Navy 10,000	Army 6,000 (70 mm) Navy 17,500 (100 mm, 80 mm)
47 mm Antitank Gun	325	Army	Army
105 mm Recoilless Gun	120	Army	Army
Type 41 Mountain Gun	230	Army	Army
Type 94 Mountain Gun	130	Army	Army
Field Gun (Models 90 & 95)	38	Army	Army
150 mm Cannon, 150 mm Howitzer	27	Army	Army

(Cont'd)

Quantity of Land Combat Weapons to be Produced During the First Half of Fiscal Year 1945

Classification of Weapons	Quantity to be Procured	Distribution	Responsibility of Procurement (The one marked "*" will be mainly responsible)
100 mm Howitzer, 100 mm Cannon	54	Army	Army
120 mm Mortar	720	Army	Army
320 mm Short Flat-trajectory Gun	800	Army 400 Navy 400	Navy
80 mm Mortar	10,000	Army 5,000 Navy 5,000	Navy
Rocket Gun	4,300	Army 2,300 Navy 2,000	Army (120 200 mm guns and 180 400 mm guns) Navy (4,000 200 mm or 120 mm guns)
Rocket Bomb Launcher	10,000	Army 1,000 Navy 9,000	Navy Production goal will be Army set at 200,000
Model 98 Grenade Discharger	3,000	Army	Army
Tanks	300	Army	Army
Self-mobile powered Gun	310	Army 270 Navy 40	Army 270 Navy 40

Part 2. Close-Quarter Combat Weapons

Classification	Quantity	Distribution	Responsibility for Procurement
Flame Thrower	2,400	Army 2,100 Navy 300	Army 2,100 Navy 300

(Cont'd)

Quantity of Land Combat Weapons to be Produced During the First Half of Fiscal Year 1945

Classification	Quantity	Distribution	Responsibility for Procurement
Antitank Mine	40,000 (5 - kg hemispherical) (2 - kg conical) (type 3 hand mine)	Army	Army
Yardstick Mine	200,000	Army 100,000 Navy 100,000	Army 90,000 Navy 110,000
Small-type Mine (Assault)	150,000	Navy 150,000	Navy
Conical Hand Mine	100,000	Army 50,000 Navy 50,000	Navy
Hand Grenade	500,000	Army 250,000 Navy 250,000	Army 125,000 Navy 375,000
Molotov Cocktail Incendiary (Smoke) Grenade	300,000	Army 180,000 Navy 120,000	Army 180,000 Navy 120,000

Part 3. Land Transport Weapons

Classification	Quantity	Distribution	Responsibility for Procurement
Tractor	210	Army	Army
Armored Troop Carrier	350	Army	Army
Truck	6,100	Army and Navy To be fixed according to the size of the ground force	Army 5,100 Navy 1,000

(Cont'd)

Quantity of Land Combat Weapons to be Produced During the First Half of Fiscal Year 1945

Classification of Weapons	Quantity to be Procured	Distribution	Responsibility for Procurement
Amphibious Motor Transport	270	Army	Army
Small-type Truck	1,100	Army and Navy To be fixed according to the size of the ground force	Army 100 Navy 1,000
Trailer	620	Army	Army
Army Transport Car	To be determined separately	Army and Navy To be fixed according to the size of the ground force	Army 3,000 Navy To be determined separately
Carts	To be determined separately	Same as above	Army 3,600 Navy To be determined separately

Part 4. Simple Weapons

To be fixed separately.

Remark: Distribution of ground weapons to the Army and the Navy will be made through a separate channel in order to best meet the war situation and will be based on practical consideration of the ground warfare of the Army and the Navy.

Production of Vessels During the First Half of Fiscal Year 1945
(For Escort, Transportation and Traffic Interruption Warfare)

Classification		Completion Expected During the First Half	Maintenance and Distribution
Destroyers	Tei	10	Navy
Submarines	Ko	2	
	Tei	1	
	Special	2	
	Supply	1	
	High speed	4	
Coast Defense Ships	Ko	20	
	Hei		
	Tei		
Navy Transports	1st class	4	Navy and Army
	2d class SB Type Landing craft	9	
Bombardment Target Ship		1	Navy
Minelayer and Concurrently Target Ships		2	Navy

Production of Vessels During the First Half of Fiscal Year 1945
(For Escort, Transportation and Traffic Interruption Warfare)

Cont'd

Classification		Completion Expected During the First Half	Maintenance and Distribution
Minelayers		6	Including 4 converted merchant vessels
Coast Defense Boats	Ko	6	Navy
	Otsu	18	
Special Patrol Boats		40	
Large Landing Barges	Special	30	Army
	Steel	1,350	Army 900, Navy 450
	Wood	1,850	Army 900, Navy 900
	Amphibious	30	Navy
Engined Barges		360	Army
Small Transport Barges		400	
Folding Boats		600	
Type 1 Submersible Transport Craft		30	

Remarks: Naval transports, submersible transports and barges shall be employed jointly by the Army and the Navy.

Chart 4-b

Antiaircraft Equipment to be Produced in the First Half of 1945 Fiscal Year

Classification			Quantity (Ammunition)	
Antiaircraft Gun	For Army Land Defense	Model-88, 70 mm antiaircraft gun (Includes those for mounting on airplanes.)	160 (210,000 rounds)	
		Model-4, 70 mm antiaircraft gun	200 (190,000 rounds)	
		80 mm antiaircraft gun	240 (360,000 rounds)	
		120 mm antiaircraft gun	95 (50,000 rounds)	
		150 mm antiaircraft gun	5 (3,000 rounds)	
	For Navy Land Defense and for Vessels	Model-1, 127 mm antiaircraft gun	30	500 rounds per gun
		127 mm antiaircraft gun	100	500 rounds per gun
		120 mm antiaircraft gun	410	400 rounds per gun
		Model-98, 100 mm antiaircraft gun	50	500 rounds per gun
	Total		1,350	

(Cont'd)

Antiaircraft Equipment to be Produced in the First Half of 1944 Fiscal Year

Classification		Quantity (amount)	
Antiaircraft Machine Gun	25 mm antiaircraft machine gun	7,200	3,500 rounds per gun
	20 mm antiaircraft machine gun (Type-4 twin mount)	900 (30,000,000)	
	13 mm antiaircraft machine gun	1,000	4,000 rounds per gun
	40 mm antiaircraft machine gun	960	4,000 rounds per gun
Searchlight	1.5 m reflector	230	
	2 m reflector	106	
Antiaircraft Balloon	Type 1	140	
	Type 2	175	
Small Sound Locator		110	
80 mm Barrage Mortar Shell		(300,000 rounds)	
Antiaircraft Kite		1,600	

Notes: Employment of antiaircraft firearms for land defense shall be coordinated between the Army and the Navy.

Antisubmarine Weapons to be Constructed in the First Half of Fiscal Year 1945

Classification		Quantity	Distribution	Responsibility for Procurement
Sonar Equipment		2,000	Navy	
Antisubmarine Radar		1,200	Army 200 Navy 1,000	
Magnetic Radar for Aircraft		1,500	Army 300 Navy 1,200	Navy
Mine	Ordinary	30,000	Navy	
	For Beaches	20,000	Navy	
Depth Charge		50,000	Army 10,000 Navy 40,000	Army 10,000 Navy 40,000

Fuel and Powder to be Produced in Japan, Manchuria and China

Classification			Quantity		Remarks
			For Fiscal Year 1945	For the First Half of Fiscal Year 1945	
Liquid Fuel	Aviation gasoline		60,000 kl	26,000 kl	
	Ordinary gasoline		50,000 kl	23,000 kl	
	Alcohol		400,000 kl	120,000 kl	
	Methanol		50,000 kl	20,000 kl	
	Heavy oil	Heavy oil for Navy use	250,000 kl	120,000 kl	
		Heavy oil for civilian use	160,000 kl	60,000 kl	
	Kerosene		130,000 kl	50,000 kl	
"RO" - Go Fuel			40,000 tons	10,000 tons	
Powder (Explosive)	Powder		70,000 tons	Army 10,000 tons Navy 25,000 tons	Details of the allotment of powder and explosive to be used in the first half of fiscal year 1945 shall depend upon the distribution of weapons.
	Explosive charges		80,000 tons	Army 20,000 tons Navy 20,000 tons	

Notes:
1. The distribution is determined separately.
2. Measures shall be jointly taken by the Army and the Navy to drastically increase the production of turpentine extracted from pine roots and other oils which are not mentioned in this table.

Appendix III

Naval General Staff Secret Document No 31

Date : 6 April 1945

Subject: Conference on War Preparations in the First Half of Fiscal Year 1945

From : Vice Chief of the Naval General Staff

To : Vice Minister of the Navy

In order to cope with the recent critical situation, it is requested that arrangements be made to carry out immediately and resolutely the plans appended hereto concerning this subject matter. Relative to the conference, it is requested that the details be worked out by competent persons.

An agreement on the war preparations to be made during the first half of fiscal year 1945 was made between the Naval General Staff and Army General Staff Headquarters, as described in the annex.

Distribution:

Chief of Naval Aeronautical Department.

Chief of Naval Technical Department.

Chief of Naval Civil Engineering Department.

Annex

I. Plan for War Preparations

A. In the first half-year period, efforts will be made to build

defense positions around Japan from which the advancing enemy can be destroyed, thus ensuring ultimate victory. The latter half of the year will be devoted to strengthening these fortifications in order that the offensive can be resumed at the earliest possible opportunity. These war preparations will be carried out as follows:

1. All war preparations will be carried out in the spirit of suicide attacks, and the total national power will be united into a fighting force that can furnish the necessary manpower for the coordinated war plans of the Army and Navy.

2. The main combat strength will be composed of air forces (including air special attack forces) and underwater and surface special attack forces. The greatest emphasis will be placed on the maximum development of their combat capabilities.

Relative to war preparations, other than those mentioned above, if they will not obstruct the build-up of the air forces and the special underwater and surface attack forces, priority will be given to important land defense forces, submarine forces, surface escort forces and supply forces in that order so that these forces, combined with the main forces, may meet the operational demands. In order to increase the air forces and the special underwater and surface attack forces to the size urgently required for these operations, it is expected that all other war preparations scheduled for completion prior to September will be postponed and those scheduled for completion after October will be temporarily suspended. Preparations for chemical warfare for both offen-

sive and defensive operations will be effected promptly.

3. Relative to war preparations for intercepting the enemy at the center of our fortified region, all human and material strength will be mobilized so that they can be immediately and most effectively employed in action at the right moment. All possible steps will be taken to enable important combat forces to continue fighting with tenacity.

4. War preparations for the counteroffensive will be drawn up in a separate document.

B. Division of War Preparations

1. The first quarter of 1945 (from the beginning of April to the end of June):

a. The greatest emphasis will be placed on gaining control of the air and sea covering the area in which decisive action is being contemplated and especially on the destruction of enemy carrier task and occupation forces.

For this purpose emergency measures will be taken for the rapid build-up and employment of land-based air forces and special attack forces.

Preparations for offensive and defensive operations in the Homeland will be effected according to and in parallel with the foregoing program.

Specially designated surface forces will be ready by the end of June to conduct raiding operations on the sea near the Homeland. Steps will be taken to intensify the defense of industrial centers and commu-

nications facilities against air attacks. Preparations for land combat on the Homeland will be carried out to the extent required by the war situation, provided that they do not obstruct other important war preparations of the Navy itself.

b. The protection to be given to surface traffic between Japan and Manchuria and China will be governed by the war preparations mentioned in the foregoing paragraph. Communications with the southern areas will be especially arranged so that they will be maintained even under the most serious combat situation. Sea transportation along the coasts of the Homeland will be so planned that it will be protected by land bases along the coast.

The surface-protecting forces will, for the time being, protect surface traffic between Japan and Manchuria and North China. Merchant vessels will be equipped with weapons which are adequate for antiaircraft and antisubmarine defense.

c. Most of the war materiel will be transported on suitable merchant vessels and the amount of supply will be kept to the minimum.

d. Preparations to frustrate the enemy's attempts to sever our short distance supply lines will be strengthened.

2. War preparations in the second quarter (from the beginning of July to the end of September):

a. An invincible structure will be established.

b. A portion of the preparations for counteroffensives will be carried out.

c. Other war preparations will be the same as those prescribed for the first quarter.

d. Whether efforts are to be directed at preparations for war in the Homeland or at preparations for counteroffensives and sustained warfare will be decided according to the war situation in May.

3. War preparations in the third quarter (from the beginning of October to the end of December) and the fourth quarter (from the beginning of January to the end of March 1946):

War preparations prescribed for the second quarter will be continued and other programs for this period will be mapped out separately.

C. Urgent measures will be taken to procure important materials, especially for fuel and powder, so that a sufficient quantity can be rapidly supplied in Japan, Manchuria and China. The greatest emphasis will be placed on the securing of aircraft gasoline.

D. The Homeland will be organized so that production, training and war preparations can be carried out with the least possible amount of difficulty; the Homeland will be organized immediately into the front line with each area establishing a self-sustaining and self-defensive structure.

E. The overseas key areas will strive to establish self-sustaining and self-defensive structures.

II. Outline for the Execution of War Preparations

A. Aircraft with its Equipment and Facilities

1. Efforts will be made to elevate the actual working efficiency of factory workers and to secure and expand aircraft production, while taking every possible measure to minimize damage from air raids. At the same time, the combat strength required as the main force of the Navy will be built up according to the following plan:

a. Maximum emphasis in air preparations will be directed toward annihilation of enemy carrier task forces. A capable force will be maintained and strengthened as quickly as possible during the first quarter of preparations and thereafter the strength necessary for destroying other enemy objectives will be reorganized. For this purpose, importance will be attached to the preparation of fighter, reconnaissance and attack planes. In order to increase the effectiveness of the attack planes, principal emphasis will be placed on the over-all conversion of attack planes into special attack planes, the combined use of special attack planes and special type planes with acceleration of the production of large, extremely powerful aircraft.

b. Relative to aircraft for antiaircraft defense, fighting power will be increased by improving the performance of the aircraft now in use, by converting them into special attack planes and by accelerating production of special type planes. Relative to aircraft to be employed in attacking enemy invasion forces, plans will be drawn up to convert most of the aircraft used in training and those presently in storage into special attack planes by late April. At the same time, efforts will be made to accelerate production of small special attack

planes and conversion of other aircraft into small, special attack planes as soon as possible. With reference to escort aircraft for sea communications, these will be replenished with second-line planes, in addition to the planes being used exclusively for this purpose. Relative to aircraft for attacking enemy air bases, they will be maintained and strengthened as long as such aircraft are available.

2. The number of aircraft to be produced: Standard aircraft will be maintained and strengthened according to Chart 1. Special planes will be maintained and strengthened in accordance with the following section on Special Attack Planes.

3. Equipment and facilities relative to aircraft:

a. Antiaircraft defense measures for aircraft production facilities (including important related production facilities) will be completed quickly and thereafter intensified. Underground aircraft production facilities, capable of producing 1,200 frontline planes monthly (including special planes), will be completed during the first quarter of preparations.

b. Air bases will be prepared and strengthened in the following general order: Kyushu Area bases to be used for the coming decisive battle, Kanto Area bases for launching attacks on enemy carrier task forces, bases for use by special attack planes of the training air group and rear echelon bases in the Sanin, Korea and Hokkaido areas.

c. In addition to strengthening the radar network for air operations (including air defense), and the air defense for communica-

Production of Aircraft for the First Half of Fiscal Year 1945

	Type of Aircraft		Minimum Requirement (The majority will be produced at dispersed underground factories. The minimum requirements must be met at all costs)	Ultimate Goal	Remarks
Naval Aircraft	Fighters	Shiden, Improved Model	2,400	2,400	
		Zero Fighter	1,800	2,700	To be converted into Shiden, Improved Model, as soon as possible
		Raiden, Improved Model		600	
		Saiun	300	300	
		Ginga	100	100	
		Total	4,600	6,100	
	Recon Plane	Saiun	850	850	
	Bomber and Attack Planes	Ginga	700	700	
		Ryusei	300	300	
		Renzan	50	100	
		Total	1,050	1,100	

(Cont'd)

Production of Aircraft for the First Half of Fiscal Year 1945

Type of Aircraft			Minimum Requirement (The majority will be produced at dispersed underground factories. The minimum requirements must be met at all costs)	Ultimate Goal	Remarks
Naval Aircraft	Patrol Planes	Type 1 Land Attack Planes	240	250	Scheduled to be employed as attack planes
		Tokai		250	
		Total	240	500	
	Recon Seaplanes	Seiran		80	
	Transport Planes	Type Zero and Type I Transport Planes		320	
	Training Planes	Medium Land-based Training Planes		200	
		Utility Trainer		200	
		Type Zero Training Fighters		350	
		Type 99 Training Bombers		100	
		Training Planes Tokai		200	
		Total		1,050	
	Grand Total		6,740	10,000	

tions, supply and repair facilities, everything will be done to improve these defense facilities in order to minimize damage from air attacks and maintain secrecy of preparations.

d. Weapons for air operations will be readied in sufficient quantity to maintain the air potential.

e. Additional details will be discussed in other sections.

4. Readying a carrier-based air force: Some of the already completed aircraft carriers are slated to be manned by special attack forces in the middle of 1945 and details will be discussed elsewhere.

B. Special Attack Craft and Related Facilities

1. Special attack craft will be readied in accordance with Chart 2. Special emphasis will be placed on the special underwater attack force, which will be the main strength in the annihilation of the enemy's invasion force and in the interception of his short-range supply lines. Also it will be the training force to be used against the enemy carrier task force. If necessary, details for preparations will be discussed elsewhere.

2. Related Facilities.

a. Production facilities will be dispersed and moved underground as promptly as possible and production will be greatly increased.

b. Various base facilities will be completed within the first quarter and strengthened thereafter. Additional details will be discussed separately.

C. Ships

Special Attack Craft

Period / Classification	First Quarter From April to June 1945	Second Quarter From July to September 1945	Third Quarter From Oct 1945 to End of Mar 1946	Remarks
Special-type Aircraft	2,000		To be determined by a later conference	To be replenished with Suisei, Tenzan, Ki - 115 and others. The details will be determined by a special conference.
Oka Plane	900	900	"	A special conference will be held to discuss improvement of performance
Kikka Plane		300	"	
Shusui Plane	450	750	"	To be constructed through cooperation between the Army and Navy. Approximately one-third of this number will be constructed by the Navy.
Karyu Plane		5	"	
Kaiten Human Torpedo	300	360	300	

Chart 2-a

(Cont'd)

Special Attack Craft

Classification \ Period		First Quarter From April to June 1945	Second Quarter From July to September 1945	Third Quarter From Oct 1945 to end of March 1946	Remarks
Kairyu Midget Submarines		350	550	1,000	To be constructed by advancing the deadline as much as possible. Improvement in the performance of the Kairyu will be considered in the last half of the fiscal year
Koryu Midget Submarines		110	430	1,000	
Small Submarines		40		120	Of the submarines scheduled for the first half, 40 will be readied by August. They will be equipped to recharge while cruising underwater as soon as possible
Shinyo	No. of Vessels	1,680	1,800	1,200	
	Engines	2,250	2,250	1,300	
Notes		The number scheduled for the Third Quarter and thereafter is an approximate figure. The details shall be determined by a later conference.			

Chart 2-b
98

(Cont'd)

Special Attack Craft

Classification \ Period		First Quarter From April to June 1945	Second Quarter From July to September 1945	Third Quarter From Oct 1945 to end of March 1946	Remarks
Kairyu Midget Submarines		350	550	1,000	To be constructed by advancing the deadline as much as possible. Improvement in the performance of the Kairyu will be considered in the last half of the fiscal year
Koryu Midget Submarines		110	430	1,000	
Small Submarines		40		120	Of the submarines scheduled for the first half, 40 will be readied by August. They will be equipped to recharge while cruising underwater as soon as possible
Shinyo	No. of Vessels	1,680	1,800	1,200	
	Engines	2,250	2,250	1,300	
Notes		The number scheduled for the Third Quarter and thereafter is an approximate figure. The details shall be determined by a later conference.			

Chart 2-b
98

1. Ships will be readied in accordance with Chart 3. All ships will be made as compact as possible and whenever possible small ships will be used.

2. Armament

a. Armament will be conducted strictly in accordance with the priority system. At the same time, ships capable of carrying special attack planes will, if possible, be fitted for this purpose.

b. Every effort will be made to simplify the fitting out of vessels. At the same time, coast defense ships, starting with those to be newly constructed, will be equipped, if at all possible, with a mixed firing boiler in order to shorten the construction time. Above all, the construction period for antisubmarine craft and submarines will be drastically reduced and the submarines will be fitted so that they may recharge their batteries while cruising underwater.

c. Details will be discussed elsewhere.

3. Air defense measures will be taken to protect the construction of ships as well as ships already constructed.

D. Weapons (Excluding weapons employed in aerial combat).

Weapons will be readied in accordance with Chart 4.

E. Surface Defense

Defense of communications between Japan, Manchuria and China and, especially, defense of the seas adjacent to the Homeland, the Tsushima Straits, the Japan Sea and North China, will be stressed. Harbor and bay facilities, air bases, communications facilities, defense

Ship Construction

Priority	Type of Ships		Requirement	Notes
4	Aircraft Carriers		2	Work will be suspended temporarily after the launching. Their use will be determined separately. Work on the "Ibuki" and "Kasagi" will be suspended temporarily.
4	Destroyers	Otsu	1	Work will be suspended temporarily.
2		Tei	20	Six will be completely equipped in the first quarter of the fiscal year. Construction of the others will be started according to the situation. Loading of Kaiten will be made possible.
3	Submarines	Tei	2	
		Tei 2 (Bo)	5	In unavoidable cases torpedo-tubes will be equipped later.
2		High speed	16	
2		Special type	2	Construction of ship No 5236 will be abandoned.
2		Supply	1	
1	Escort-ships	Ko	30	Twenty will be completely equipped in the first half of the fiscal year. Construction of the others will be started according to the situation.
		Hei		
		Tei		

(Cont'd)

Ship Construction

Priority	Type of Ships	Requirement	Notes
3	Transports: First-class	5	
	Transports: Second-class	10	
	Small Patrol Boats	40	To be completed by July.
1	Auxiliary Escorts	Ko 40 Otsu 80	
2	Light Minelayers	2	
2	Converted Minelayers	6	To be completed by the end of June. (Four of them will be reconverted merchant ships.)
5	Special Landing Barges	460	200 will be made of iron and 200 of wood. 30 will be for amphibious purposes.

Remarks: If obstacles arise in the construction and equipping of the special attack craft, the date of completion for those expected to be completed by September will be extended, while those expected to be finished after September will be temporarily suspended.

Weapons

1. Antiaircraft Weapons

Classification of Weapons		Quantity	No. of Shells per gun or Projecter	Remarks
AA Gun	Type-1 127 mm gun	30	500	Armour piercing shells will be about 10% of land based AA Guns' shell.
	127 mm gun	100	500	
	120 mm gun	470	400	
	Type 98 100 mm gun	50	500	
	Total	650		
Large Calibre Machine Gun	40 mm machine gun	500	4,000	1. Land based machine guns will be of vehicle types. 2. Armour piercing shells will be about 20% of all machine gun shells.
	25 mm machine gun	10,000	3,500	Including 2880 guns scheduled for delivery to the Army
	13 mm machine gun	1,200	4,000	
Balloon, Kite	AA balloon	150		
	AA kite	1,600		
	Searchlight	150		

2. Land Combat Weapons

Weapons

Classification of Weapons		Quantity	No. of Shells Per Gun or Projecter	Remarks
Rocket Gun	200 mm rocket gun	1,200	50	
	120 mm rocket gun	4,000	50	
	ROTA gun	17,500	4	
Bomb Launcher	For 250 kilo bomb	10,000		
	For 60 kilo bomb	20,000		
Quick Firing Gun	Medium and Small calibre gun	200	300	Guns will be converted from shipboard guns
	Large calibre gun	12	300	
	200 mm short barrel gun	50	60	
	120 mm short barrel gun	850	400	
	80 mm gun	50	400	
Others	80 mm mortar	10,000	300	
	7.7 mm machine gun	2,000	4,000	
	Rifle	100,000	300	
	Pistol	12,000	60	
	Grenade thrower	2,500	100	
	Small mine	150,000		

Weapons

Classification of Weapons			Quantity	No. of Shells Per Gun or Projecter	Remarks
Others	Attack mine		100,000		
	Stick mine		150,000		
	Hand grenade (corn-shape)		100,000		
	Hand grenade		5,000,000		
	Molotov cocktail bomb		150,000		
	Incendiary grenade		60,000		
	Dynamite		100,000		
	Smoke bomb		60,000		
	Small smoke bomb		150,000		Secondary small arms necessary for the above mentioned weapons will be prepared. Simple handy weapons will be decided later
	Steel helmet		1,000,000		
	Sword		300,000		
	Others				
Chemical Weapons	Gas mask		1,000,000		
	Light anti-gas suit		300,000		
	Anti gas cover		300,000		
	Neutralizer	Powder No 3	600 tons		Secondary small arms necessary for the above mentioned weapons will be prepared. Preparation for positive chemical warfare will be decided separately
		Powder No 4	2,500 sets		
		Powder No 5	2,500 sets		
	Others				

Weapons

Classification of Weapons		Quantity	No. of Shells Per Gun or Projecter	Remarks
Smoke Screen Weapons	Smoke powder	3,000 tons		
	40 kilogram smoke screen apparatus	3,000 sets		
	Gunpowder	25,000 tons		
	Explosive	20,000 tons		
Vehicles	Amphibious tank	70		
	Tractor	70		
	Other vehicles			To be decided later

3. Anti-submarine Apparatus

Classification	Quantity	Remark
Depth Charge	40,000	
Mine	30,000	
Hydrophone, Magnetic Detection Apparatus	Necessary amount for the anti-submarine vessels and airplanes	

4. Other Weapons

Necessary amount for vessels, planes and other strength will be prepared.

facilities, patrol facilities and repair facilities, which are necessary for antisubmarine and antiaircraft defense, will be readied and strengthened.

As for the defense of the Southern Area communications routes, every effort will be made to preserve and strengthen the coastal shipping lanes along the continent.

F. Defense of the Areas.

1. The defense priority for the various areas will be as follows:

a. Homeland, Ryukyu Islands, Bonin Islands and South Korea.

b. Central and North China, and North Korea.

c. Other areas.

2. Outline of Defense:

a. The Homeland, South Korea Area, Ryukyu and Bonin Islands sector:

(1) Defense of the Homeland area will be carried out under the plan that the Kanto, Kyushu, South Korean and Hokkaido areas will be major fortresses linked with each other by intermediate fortifications and that control will be maintained over the Tsushima, Tsugaru, and Soya Straits and the southwestern channels of the Homeland. As for defense of the Ryukyu and Bonin Islands, the existing program will be strengthened in order to covert them into truly impregnable strongholds.

Above all, special efforts will be directed toward completion of the facilities necessary for displaying the combat effi-

ciency of the air forces and the special attack forces, which are to be used in the decisive battle, and toward perfection of communications facilities of every kind.

These defenses will be completed generally by the end of the first quarter and quickly strengthened during and after the second quarter.

(2) More thorough measures will be taken to strengthen antiaircraft defenses. These measures, which have already been discussed, will be speedily completed so that the vital sources of the nation's fighting power, as well as vital supply stockpiles, may be developed to the maximum and so that various production capacities may be maintained at peak level on a long range basis.

(3) A strong and effective supply line, combining sea, land, and air routes, will be established.

b. Central China, North China, and Korea: Relative to defenses in Central China, North China and Korea, emphasis will be placed on disruption of enemy operations aimed at cutting off our Homeland from the continent. This operation generally will be conducted in accordance with the foregoing paragraph.

c. Other areas: Local defense facilities will be used and every effort will be made to strengthen these defenses.

G. Fuel and Powder "RO"

1. Fuel: The production goal for the principal fuels shall be as shown in the following table:

	First Quarter			Second Quarter		
	Home-land	Southern Area	Total	Home-land	Southern Area	Total
Aviation Fuel (kiloliters)	130,000	60,000	190,000	140,000	70,000	210,000
Heavy Oil (tons)	120,000	160,000	280,000	130,000	150,000	280,000
Ordinary Gasoline (kiloliters)	9,000	10,000	27,000	9,000	10,000	46,000
Light Oil (kiloliters)	8,000			27,000		

2. Powder "RO": Ten thousand tons. This amount represents the total Army and Navy requirements.