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SERIAL NO. 13

TACTICAL PROBLEM II-1934-SR.

BLUE

STAFF SOLUTION

by

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TACTICAL PROBLEM II-1934-SR.

ESTIMATE OF THE SITUATION (REQUIREMENT 1)

SECTION I

BLUE

OWN MISSION

SUMMARY OF THE SITUATION: Vice Admiral S having, at 0900, 14 August, received a despatch from his C-in-C giving information of the probable approach of a large ORANGE Force and stressing the necessity for Convoy Seven arriving at MANILA at an early date, has made a strategic estimate of the situation whereby he arrived at the following strategic

DECISION: "To destroy the ORANGE Force threatening Convoy Seven by engaging it decisively in a fleet action with all available forces, in order to assure the early arrival of Convoy Seven at MANILA".

A study of the C-in-C's order shows clearly that the Purpose is to insure the early arrival of Convoy Seven at MANILA. This makes the general attitude as one of defense strategically, but, in order to resist the impending ORANGE threat, the tactical attitude is offensive.

From the foregoing he deduces the following Tactical

MISSION: To destroy the ORANGE Force threatening Convoy Seven in order to assure the early arrival of Convoy Seven at MANILA.

SECTION II

RELATIVE STRENGTH OF OPPOSING FORCES

ENEMY STRENGTH.

- (a) Political status. Does not apply.
- (b) Economic status. Does not apply.
- (c) Geographical features. The area which will probably be the theatre of operations is clear of obstructions except for the HALL Islands about fifty miles north of TRUK, and the LOSAP Islands about fifty miles to the East Southeastward.
- (d) Weather. The weather is clear, the barometer is high, there is no wind, the sea is smooth, visibility is high, the ceiling is unlimited, flying conditions are excellent. Indications are that fine weather will continue.

Sunrise 0600. Sunset 1800. No moon.

Daylight about 0530.

- (e) Information and Security. Airplanes from the ORANGE Force have been sighted reconnoitering TRUK during the afternoon of the 14th, so that ORANGE may be assumed to know that there is a large assembly of BLUE convoy vessels and escort at TRUK. ORANGE may be assumed to know the composition, number, and types of BLUE combatant ships. It is probable that ORANGE will gain further information of our force from submarines observing off TRUK and by air reconnaissance. His method of denial of information will be limited to his ability, to drive off or keep down BLUE submarines and to driving off of BLUE aircraft and cruisers.

(f) Materiel characteristics. The materiel readiness of ORANGE may be assumed to be excellent in all respects. The materiel tactical characteristics of ORANGE are as shown in Annex A.

(g) The latest information available, gained by patrol planes from TRUK during daylight of 14 August, indicates that the force which ORANGE has sent to raid BLUE lines of supply consists of the following ships and types:

4 BB of the earlier ORANGE type	This indicates that the BBs are Nos. 1, 2, 3 and 4.
3 CC	All that are available to ORANGE. CCs 1, 3 and 4.
1 CA Div. (4 ships) HYOKA class.	
1 CA Div. (4 ships) KAKO class	
2 Squadrons of destroyers (DD)	These are probably of late design mounting 4 - 4.7 guns.
1 Squadron of destroyer leaders (DL)	These probably carry 6-5.1 guns.
1 CV of large fast type	ORANGE has two CV of early design with large hulls, one an ex-BB, the other an ex-CC. The one reported is probably CV-2, the ex-CC.

8 Submarines of Fleet type

Aircraft	14 V0
	32 VS
	16 VF
	16 VB
	<u>24 VT</u>

Total 102

At noon on 14 August this force, in fleet formation is 150 miles north of TRUK, by 1700 of that day it is 200 miles Northeast of TRUK proceeding at moderate speed on a Northeasterly course. The fact that this large force is in the vicinity indicates that it probably intends to raid BLUE supply lines for which he is fully prepared.

- (h) Racial characteristics. ORANGE personnel are known to be courageous, well trained and determined.
- (i) Logistic support available. Only that contained within the force. It is assumed that ORANGE has refueled those ships requiring same and that ammunition supply is replete.
- (j) .ORANGE may or may not be aware of the fact that his force was reconnoitered on 14 August; however, he must know that he cannot long remain in the vicinity of TRUK unobserved. The fact that the ORANGE Force is present indicates that ORANGE mission dictates a raid and that the execution of it will not long be delayed. Therefore, we may expect ORANGE to reverse course during the night and be in a striking position off Northeast entrance by daylight. ORANGE submarines may be expected off the entrance at any time during the night but probably would not attempt to force an entrance into the anchorage through the protecting mine fields, nets and surface craft. BLUE must, therefore, expect to encounter submarines almost immediately on leaving port and the whole ORANGE Force soon thereafter. With the above considerations it appears certain that a major action will take place, most probably on the 15th.

OWN STRENGTH.

- (a) (b) (c) (d) same as under Enemy Strength.
- (e) Information and Security. Any further information regarding ORANGE Force will be limited to that which can be obtained by our own scouting operations, air, surface and submarine.
- (f) Of the combatant BLUE Forces listed, all will be available. Our material condition is satisfactory. For tactical materiel characteristics see Annex A.
- (g) At 0500, 15 August, the BLUE combatant Forces at TRUK will be clear of Northeast Pass in the selected cruising disposition. We must await contacts of our scouts and the development of these contacts for further information of the enemy's disposition.
- (h) Our morale is excellent. The personnel is well trained and efficient.
- (i) Our fuel and ammunition is adequate. The proximity of a well defended base in the immediate theatre of operations to which damaged ships may retire and aircraft reservice with limited facilities is an important factor.
- (j) Our BLUE forces will have patrolled the approaches to Northeast Pass during the night.

RELATIVE STRENGTH

1. Battle Line.

Compare first the relative strength of the opposing Battle Lines. ORANGE has a total of seven capital ships opposed to a total of five for our BLUE Force.

The Battle Line speeds, considering the slowest units, are 22.5 knots for ORANGE and 20.5 knots for BLUE. However, ORANGE has one ship that can make 27.5 knots and two that can make 26 knots. This unit of 3 capital ships comprises battle cruisers and can be used as a fast wing if desired. The maximum Division speed of this wing would be limited to 26 knots by the two slow ships. The other four units are battleships and constitute one division with a speed of 22.5 knots, although two of the ships can do 23 knots.

This battle line has a total life of 101. It can bring a total of 72 14-inch guns to bear on an opposing battle line, but its maximum range is 30,000 yards and airplane spotting is practically necessary at ranges above 20,000 yards. This battery cannot penetrate BLUE capital ship side armor at ranges above 16,000 yards, or deck armor below 27,000 yards.

The BLUE Battle Line has a total life of only 84.8, as against 101 for ORANGE. It can bring only 58 heavy guns to bear on the ORANGE Fleet, but it has a range of 33,000 yards, a superiority of 3,000 yards in range. Plane spot is required at ranges over 20,000 yards. A study of the curves of fire effect shows that the best range for BLUE is from 17,500 to 20,500 yards at target angles of 75° or greater, from 22,000 to 28,000, and above 30,000; but if ORANGE can present target angle of 45° between 17,500 and 24,000 yards he has an advantage; that the most dangerous range is under 17,500. This assumption is based on there being seven ORANGE ships opposed to five BLUE.

If, for some reason, ORANGE should not put all seven capital ships in the line against BLUE, it would react in favor of BLUE in this part of the action. If ORANGE can present a target angle of 60° , BLUE is inferior below 24,000 yards.

All ORANGE ships in the battle line carry torpedoes, but it is not probable that these can be used with success due to the gun ranges that will prevail, although ORANGE torpedoes have a range of 13,500 - 16,400 yards.

Each force will desire air spot. BLUE is numerically superior to ORANGE in total numbers of planes, 129 to 102. In addition to his 16 VF planes ORANGE may employ as many as 24 VS in fighter groups bringing his total effective for aerial combat purposes up to 40. On the other hand BLUE may augment his 18 fighters by as many as 45 VS raising his total for combat purposes to 63, however, VS are not so effective for combat purposes BLUE may logically expect to control the situation in the air, secure plane spot and to some degree deny plane spot to ORANGE.

SUBMARINES.

BLUE has available, attached to the defense forces at TRUK, a total of eleven submarines of an old type not capable of keeping station with the Fleet at sea at speeds above 13 knots, they carry a total of 12 F-type torpedoes each and have bow tubes only, - four to each boat. Total torpedoes 132, type F.

ORANGE has eight submarines of the Fleet type; these are capable of maintaining station at Fleet speeds up to 17 knots. All of these boats carry 10 torpedoes each, - a total of 80 type-G torpedoes. Two of these boats are fitted with six bow and two stern tubes; the remaining boats are fitted with four bow tubes and two astern.

BLUE thus has the advantage in numbers, but ORANGE has the advantage of mobility, and hence the possibility of being able to utilize his submarine strength in effective areas.

CRUISERS.

The heavy cruisers present in the ORANGE Forces have been determined to be 4 MYOKOS and 4 KAKOS. A comparison of the essential characteristics of the 8" cruisers in each force follows:

<u>BLUE</u>		<u>ORANGE</u>
5	numbers	8
32.5	Speed	33
47	Guns	64
34	Range	27-31
23.5	Life	33.6
30	Tubes	96
$\frac{3}{1}$	Armor	$\frac{4}{1.25} - \frac{1.5}{1.5}$

In addition, BLUE has light cruisers Nos. 43, 44 and 45, mounting a total of thirty-six 6-inch guns with a range of 27,000 yards, a speed of 32.5 knots and a total life 14.1.

ORANGE can utilize two light cruisers of the KISO class that are present with the Fleet as destroyer squadron flagships and one YUBARI. These ships have a speed of 33 knots and mount a total of 20 5.5 guns with a range of 20,000 yards, and have a combined life of 8.

ORANGE cruiser force is organized into two 8" divisions of 4 ships each. The 3 6" cruisers might be detached from the destroyer squadrons and organized into a third division. The BLUE cruisers are organized into two divisions, one of five with 8" guns and one of three with 6".

The ORANGE division of 4 KAKOS is greatly inferior to a

BLUE division of 3 type 43 ships at ranges between 13,000 and 21,000, but would be about equal at ranges below 12,000, having side penetration and an advantage in fire distribution. These ships are weaker individually, than our BLUE CL-43 up to a range of 25,000 yards.

The ORANGE division of 4 MYOKOS is slightly inferior to the BLUE division of 5 CA at ranges from 24,000 to 30,000, and at ranges below 24,000 the inferiority gradually increases until at 15,000 and below ORANGE is greatly inferior regardless of target obliquity.

Individually, any of our BLUE cruisers is superior to the ORANGE squadron leader cruisers.

ORANGE has a total of eleven cruisers to BLUE eight.

All considered, ORANGE may be considered very slightly superior in cruisers if he employs the 3 CL as an additional division of cruisers.

Destroyers.

Numerically, BLUE is stronger than ORANGE, the ratio being 46 to 36. The torpedo threat is BLUE's greatest strength, carrying a total of 552 torpedoes to ORANGE 432; both have ranges of 13,500 yards except the DL's whose torpedoes have ranges of 6-15,000. In guns, ORANGE has a superiority in range, BLUE a superiority in numbers. If BLUE destroyer forces become engaged in a gun battle with ORANGE destroyer forces it becomes imperative that they close the range. ORANGE will probably retain the three light cruisers with the squadrons; which will appreciably augment the gun power of ORANGE in the destroyer squadrons.

Summing up the estimated strength to this point, it shows that ORANGE has a superiority in the battle line, except in the range band from 17,500 to 20,500 and from 22,000 to 28,000 yards and over 29,000 yards; is slightly superior in cruisers; is inferior in destroyers and probably will be superior in submarines in the battle area.

Aircraft.

BLUE is slightly superior to ORANGE in total numbers of aircraft. The performances of the aircraft, type for type, may be considered equal. The proficiency of ORANGE personnel, although believed to be inferior to BLUE, must, as a conservative estimate, be assumed to be equal.

The following tabulation shows the numbers by types:

<u>ORANGE</u>	<u>Attached</u>	<u>Type</u>	<u>Attached</u>	<u>BLUE</u>
16	16 CV-2	VB	CV-4	18
16	CV-2	VF(2)	CV-4	18
14	BB CC	VO	BB	15
32	16 Crudivs 16 CV-2	VS	32 Crudivs 18 CV-4	50
24	24 CV-2	VT	CV-4	18
--		VP	TRUK	6
--		VJ	CV-4	4
<hr/>				<hr/>
102				129

In a comparison of the effectiveness of the various types, it has already been noted that BLUE may establish superiority in the air by employing VS not required for spotting to augment his combat strength. The VB strength is approximately equal.

While the number of observation planes on each side are approximately the same, BLUE has two reliefs for each VO engaged in spotting which will tend to greatly increase the protection of these planes while engaged in their mission. In the VT class

ORANGE has a superiority of 4 to 3 and the result of his blows with this type will be in about that ratio unless BLUE counters with an effective air defense of his heavy units or damages the flight deck of the ORANGE carrier before these planes take off. In the VP and VJ types BLUE has ten planes which are not balanced in the ORANGE Force. The VPs can perform excellent service in strategic scouting and maintaining contact and as each plane carries 2-1000 or 4-500 lb. bombs, the unit has considerable long range striking power. The VJ type will be useful in tactical scouting or as an anti-submarine patrol.

The carriers of the two forces, are vital factors up to the time the aircraft are off, after that the importance of the carriers as objectives is somewhat diminished.

ORANGE CV-2, the large fast type built on a battle cruiser hull, has a speed of 28.5 knots and carries ten 8" guns, its destruction or damage prior to sending off its planes would be of great importance. The main ORANGE air strength is concentrated in this ship.

Factors of strength and weakness.

BLUE

<u>Strength</u>	<u>Weakness</u>
Battle line gun range superior to ORANGE	Inferior in battle line in number of ships, guns and speed.
Destroyer strength is superior to ORANGE.	Slightly inferior in cruisers.
Numerically superior in submarines but these must be skilfully handled to be effective in battle area due to lack of mobility.	Possible absence of submarines in battle area due to lack of mobility of BLUE SS.
Superiority in numbers and types of aircraft.	
Proximity of well defended shore base with attached planes of patrol type.	

ORANGE

<u>Strength</u>	<u>Weakness</u>
Superior in number of ships, guns and speed in the battle line.	Slightly shorter range of battle line guns.
Mobility of submarines of Fleet type.	Inferior in destroyers. Inferior in aircraft.
Slightly superior in cruisers	Numerically inferior in submarines.

To summarize the foregoing.

BLUE

<u>Strength</u>	<u>Weakness</u>
Air power	Battle Line
Destroyers	Heavy Cruisers
Shore base	

ORANGE factors are the reverse.

SECTION III

ENEMY'S PROBABLE INTENTION

1. Enemy Mission.

ORANGE probably knows that the BLUE Fleet, based on MANILA, plans to move northward to seize a base nearer ORANGE territory. He also probably knows that the continued arrival of a large amount of material and supplies is necessary for the maintenance of BLUE Fleet, and to the preparation for and carrying out of the projected offensive.

Following logically from this knowledge it is probable that the new situation desired by ORANGE is the interruption of the BLUE line of supply.

In order to accomplish this, ORANGE must adopt an attitude which is tactically offensive.

In order to insure the interruption of the BLUE line of supply, ORANGE must locate and destroy the supply convoys. When the supply convoys are escorted, the opposition of the escort must first be overcome. The immediate tactical task, then, which will best contribute to the new situation desired by ORANGE, is the destruction of the BLUE escorting force.

The probable enemy mission is:

To destroy the BLUE escorting forces, in order to interrupt the BLUE line of supply.

2. Courses of Action Open to the Enemy.

(a) In order to accomplish the destruction of the BLUE escort force, ORANGE may attack it with gunfire, with torpedoes, with mines, with bombs, or with a combination of any or all of the foregoing weapons, either simultaneously or successively. The major objective of ORANGE attacks would naturally be the BLUE Battle Line, the backbone of the fighting strength of the escort force.

Torpedo attacks by ORANGE light forces would be opposed by the light forces of BLUE. Attacks by ORANGE submarines would be opposed by BLUE destroyer anti-submarine screens, and by a possible anti-submarine patrol of aircraft.

Mine attacks would be opposed by sweeping, in the case of anchored mines, and by observation from screening vessels and aircraft, and consequent maneuvering to avoid the mine field, in the case of drifting mines.

ORANGE will attack with 500 lb. and 1000 lb. aircraft bombs and possibly with torpedoes. These attacks would be resisted by anti-aircraft batteries (including machine guns), and protective air patrols.

By the appearance of an ORANGE Force off TRUK, it is safe to assume that ORANGE knows of the uses to which the island is being put as one of BLUE's intermediate bases. The appearance of his planes over TRUK on the afternoon of the 14th means that ORANGE has thoroughly reconnoitered the place and is probably fully aware of the strength of BLUE Forces present. His appearance at this time means that his sources of information are accurate and reliable. ORANGE, in estimating the situation, will arrive at an appreciation of his superior strength factors, and also his weakness. He will endeavor to apply his strength against BLUE weakness in a decisive manner, and will attempt to avoid having BLUE strength factors applied against his own weakness. ORANGE strength factors are Battle Line superiority at favorable ranges, possibly cruiser and submarine superiority. His weakness is destroyers and air power.

- COURSE I Attacks of attrition
- COURSE II a decisive engagement, engaging initially at favorable extreme ranges then closing to decisive ranges
- COURSE III To engage decisively by closing range at once, to decisive favorable range (under 18,000 yards)

Analysis of Enemy's Courses of Action.

1. Course I might be carried to such an extreme that decisive results would be too long delayed, decisive results are required and the time element is an important factor. In attacks of attrition by air, BLUE being superior the results might be unfavorable to ORANGE. Attacks with submarines may or may not prove successful but no doubt ORANGE would expect BLUE to be guarding against such attacks. In attacks with light forces, these would be night DD attacks and would be fatal to ORANGE if unsuccessful as ORANGE is already inferior to BLUE in DDs. Attacks of attrition, in general, would delay decisive results, would dissipate ORANGE forces, would not employ his forces to the best advantage, that is coordination of effort. Considering the advantages and disadvantages Course I is rejected.
2. Course II. In this course of action ORANGE would have to engage at ranges above 27,000 yards, damage on BLUE would accumulate slowly and with superiority in DD and aircraft it might be possible before ORANGE can close to decisive ranges for BLUE to deliver Air and light force attacks which if successful might reduce the speed of ORANGE battle line to a parity or below that of BLUE thereby gaining an advantage and depriving ORANGE of one of his greatest advantages. With superiority of air and DDs and near equality in cruisers it would be difficult for ORANGE to defeat such attack

An engagement if delayed too long might permit BLUE submarines to get into position for attacks. The disadvantages seem to outweigh the advantages.

3. Course III. In order that the engagement may be decisive the range must be closed and although ORANGE would suffer damage in so doing he may overcome this somewhat due to his superior speed, presenting proper target obliquity and closing under cover of smoke. The superior strength of ORANGE in cruisers and range of DDs are factors which are to his advantage to drive off BLUE light forces threatening or making attacks to prevent ORANGE closing the range. If ORANGE can close to decisive ranges favorable to him without receiving too much damage the engagement will probably be in his favor. In this course ORANGE would have his submarines in the battle area and would deny attacks by BLUE submarines. The advantages seem to outweigh the disadvantages. Course III is accepted and Course II is rejected. Course accepted.
4. ORANGE will - "engage decisively by closing range at once to decisive favorable range (under 18,000 yards).
5. My conception of this course is that ORANGE is willing to accept a decisive engagement between battle lines relying upon his superior speed to close the range and in so doing he will present favorable target obliquity, close under cover of smoke if required, will use his CCs to drive off light force attacks while closing and attacks by his light forces and aircraft in our battle line may be directed when circumstances so require. ORANGE

will attempt to draw the engagement into such area as will permit his submarines to attack our battle line. Plane spot is essential to BLUE in the early stages of the engagement, so he may be expected to attempt to deny BLUE plane spot. ORANGE will probably use his CCs as a detached wing.

6. Enemy's Probable Intentions

From the previous discussion it is concluded that the tactical plan of ORANGE will be about as follows:

"To engage decisively by closing range at once, presenting favorable target obliquity, using smoke as required, attacking with his air and light forces, making attacks with submarines at every opportunity in order to destroy BLUE escorting forces."

To carry out the above it is assumed that ORANGE will -

1. Station submarines off TRUK to gain early information of our sortie.
2. Seek a decisive day engagement on afternoon of 15th from windward position and as far from TRUK as practicable.
3. Close battle line range as rapidly as possible to below 18,000 yards, employing smoke as required and presenting target obliquity of 45°.
4. Defend his battle line from light force attacks using CCs to support his light forces.
5. Attack our plane spot especially during early stages of engagement.
6. Defend his own plane spot.

7. Approach from such direction as to avoid sun glare.

8. Attack our battle line and/or carrier with aircraft.

9. Attack our battle line with light forces supported by battle line gun fire, attack to be made as required or when favorable opportunity presents itself.

10. Employ his main submarine strength in the battle area disposed toward our battle line.

11. Will use his CCs as a detached wing.

SECTION IV

COURSES OF ACTION OPEN TO ME

1. Appreciation of Own Mission.

(a) The BLUE mission is "To destroy the ORANGE Force threatening Convoy Seven in order to assure the early arrival of Convoy Seven at Manila."

In order that the purpose of the mission may be attained, the task must be carried out in such a manner as to permit the early sailing of the convoy, and to insure that it can not be attacked en route by a force superior to the available escort.

The task, then, is to engage the ORANGE Fleet so decisively as to render it incapable of holding Convoy Seven in port, or of threatening its safety en route.

Immediate action is necessary, in order to avoid delaying the convoy.

(b) The strength factors upon which BLUE must rely for the accomplishment of his task are his:

Superiority of Battle Line at long ranges.

Superiority in aircraft.

Superiority in destroyers.

Ability to deliver large volume of torpedo fire from DDs.

(c) The tactical attitude is offensive.

(d) No reinforcements may be expected, and there are no other BLUE forces whose operations will affect the task in hand.

2. Considering that the ORANGE Fleet must be defeated in such a decisive way as to be of no further menace to our BLUE convoy, it must either be destroyed, or so badly damaged as to be incapable, at least for some time, of further offensive operations.

The BLUE Force has inferior speed so can not force an action, but it can seek one. The General Course of Action then open to BLUE is "to seek an early and decisive day engagement."

Analysis of Courses of Action Open to BLUE.

1. The General Course of Action having been determined to be "to seek an early and decisive day engagement" the following courses of action subordinate to the General Course are:

Course I precede decisive engagement by attacks of attrition.

Course II to engage decisively by coordinated simultaneous attack with all available forces, closing the range at once sufficiently to support attacks by air and light forces .

Course III to engage initially at extreme and favorable long ranges then close to decisive ranges attacking with air and light forces.

Analysis of Courses of Action Open to Me.

Course I. Prompt action must be sought in order not to delay the convoy. Attacks of attrition would consist of air attacks day and night, submarine attacks and night destroyer attacks. These attacks involve a large element of chance and would require some time to effect. The damage inflicted would assist in gaining a favorable decision in a decisive engagement, but nothing short of a decisive engagement will accomplish the Task of the mission. The time element is an important factor as the early arrival of the convoy is essential. Attacks of attrition would delay the convoy. The advantages seem to be outweighed by the disadvantages. Course I is rejected.

Course II. This course might be successful but by closing the range immediately we would be precipitating a decisive engagement without using the advantage we have at extreme and long ranges, where we can inflict considerable damage, due to our superiority at those ranges, prior to closing the range.

Although slightly inferior in cruisers we probably have sufficient strength in light forces to deny ORANGE successful light force attacks and we have sufficient superiority of DD to drive home an attack when required. Our air superiority is such that

we can by protecting them maintain plane spot which is essential in the early stages of the engagement and we may be able to deny plane spot to ORANGE. In this course we would be employing our forces in coordinated action in which there would be mutual support. However we would suffer heavy losses and we would inflict heavy losses but a decisive engagement is required and such losses cannot be prevented. This course would accomplish the Task of our mission but one of our greatest advantages i.e. extreme and long ranges for battle line is not being used. Our carrier carries one of our most important effectives, aircraft, but to keep the carrier with the battle line would be to subject it to attacks by air and submarines, so the best means of avoiding such attacks would be to leave it on the disengaged side, beyond visibility of aircraft and surface vessels and properly screened against submarines.

Course III. Prompt action as previously stated, is necessary so also is a decisive engagement but by engaging ^{long} initially at extreme and favorable/ranges we would be employing one of our greatest advantages and early in the engagement. Although at extreme ranges we would not be able to inflict heavy damage, however the damage would accumulate. We would probably be able to establish priority of effective fire.

Plane spot is essential in the early stages for both, however, with superiority of aircraft, we can maintain plane spot and may be able to deny it to ORANGE but whether we deny it or not we still have the advantage at extreme and the long range bands. ORANGE is superior between 28,000 and 30,000 yards range but this is a narrow band and will be difficult to maintain as by maneuver BLUE can open or close the range and probably prevent ORANGE maintaining this favorable narrow range band. At these ranges ORANGE's damage on BLUE would be slight. In order that the engagement may be decisive the range must be closed and ORANGE will try to close it as quickly as possible. He has a

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speed advantage of two knots with which to close the range but if ORANGE tries to close and BLUE tries to prevent range being closed in order to maintain favorable range, we can, by maneuver, prevent ORANGE from closing to under 18,000 yards for an hour and probably longer in which time we should have inflicted sufficient damage on ORANGE to be willing to close to decisive range.

Our light forces may be used in an offensive or defensive role in the early stages but the success of light force attacks depend upon support of battle line fire and this is not assured at extreme and long ranges consequently we must wait to deliver such attacks when the range is closed for decisive engagement. In this course we should employ our light forces initially in defensive role and then attack with them when range is closed for decisive engagement. Our aircraft may be used in defensive or offensive role or both but the necessity of plane spot requires that part of our aircraft assume defensive role. Aircraft attacks on enemy battle line, unsupported by our battle line, would not be successful due to enemy being free to maneuver and be able to employ all his defensive weapons, aircraft and A.A. fire, to oppose such attacks. Our superiority of aircraft would be lost and nothing definite accomplished.

Our light forces are superior but that superiority is reduced somewhat by the necessity of maintaining anti-submarine screens for our battle line and carrier.

We have submarines of which ORANGE is no doubt cognizant consequently he will no doubt also employ screens for the same purposes which will reduce our light force effectives in the same proportion. ORANGE due to superior speed will probably obtain the weather gauge but we can seek a neutral gauge and so deploy as to avoid sun glare. The remarks under Course II with regard to my carrier apply also in this Course. Course III seems to offer more advantages and fewer disadvantages than Course II, therefore Course II is rejected and Course III adopted.

SECTION V

THE DECISION

The selected course of action as our Decision is expressed as follows:

To seek an early and decisive day engagement:

- (a) engaging initially at extreme and favorable long ranges;
- (b) employing light forces initially to defend own battle line;
- (c) closing battle line range making coordinated attack with all forces

in order to destroy the ORANGE force threatening Convoy Seven.

SECTION VI
SUPPORTING MEASURES

1. (a) Operations Required.

In order to carry out the decision, the following operations will be required:

1. Scouting to locate the enemy, and to observe and report his dispositions, course and speed and changes therein. (Tactical Scouting).

2. Protection of own forces against submarine and mine attack.

3. A battle line engagement at ranges, and with angles of target obliquity, favorable to BLUE.

4. A determined air and light force attack when adequate support can be had from the battle line.

5. Submarine attacks on important enemy combatant units, primarily capital ships and the carrier, at every favorable opportunity.

6. Defense against aircraft attacks.

7. Defense of own air spot.

8. Prevent surface vessels laying smoke to interfere with battle line gunfire.

(b) These operations are examined in detail as follows:

1. For the search and tactical scouting, we have the following forces available:

Air - - - - - Various types of planes.

Surface - - - - CA, CL and DD.

Subsurface - - Submarines.

For air scouting the VS planes are smaller and handier, have better speed, climbing power and ceiling and a smaller chance of being sighted than the VP. The VP have the advantage of a longer radius of action and endurance. The VJ, being of inferior value

to the Fleet for air operations, are valuable for use as an anti-submarine patrol in the immediate vicinity of the Fleet. There is a total of 50 VS divided among the cruisers and the carriers which is sufficient to patrol a large sector but on a short radius. The VP planes can carry 2 1000-lb. or 4 500-lb. bombs and fuel for 900 miles, or 11.4 hours; there are 6 available. When not equipped with bombs their radius is 1422 miles, 17.4 hours.

For surface scouting there is one division of five 8" 10,000 ton cruisers. There is also a division of 3 cruisers of type 43. The destroyer squadrons are not particularly well adapted for scouting and will be kept in the Fleet disposition.

The submarines are not well adapted for tactical scouting due to lack of speed, but are valuable for protective screening and are able to penetrate a screen. They should prove valuable on patrol duty during and before the sortie and as an advance screen while cruising.

Early information of the position, composition and disposition of enemy forces on the morning of 15 August is of utmost importance. This information may be very satisfactorily obtained by employing the shore based VP squadron to search the probable avenues of approach to a radius of two hundred miles from TRUK. This will permit a concentration of cruisers and destroyers with the main body which is desirable in the event of early contact. VS planes aboard cruisers and carrier will be available for tactical scouting operations and to assist in establishing local superiority in the air.

2. Protection against submarines and mines can best be obtained by a destroyer anti-submarine screen and by a small air patrol in the immediate vicinity of the Fleet, especially ahead. For this service destroyers are available and the VJ planes from CV-4.

3. The Battle Line gun range cannot be chosen by BLUE but every opportunity should be taken to establish the most favorable range; this is the zone between 22,000 and 28,000 yards; if ORANGE can be denied plane spot this will react to BLUE's favor.

4. Destroyer attacks should utilize all possible destroyers and should be supported by cruisers. An anti-submarine screen will be necessary, but may be reduced to a minimum considered consistent with safety, having in mind the near fleet speeds of the ORANGE submarines. Destroyer divisions that have fired all torpedoes can be utilized as anti-submarine screen, relieving other destroyers. These can be sent in for subsequent attacks. Destroyer attacks must be supported.

5. In submarines, our BLUE forces have eleven old SS stationed at TRUK. These boats have only 13 knots surface speed, so cannot gain or maintain Fleet position. It will be necessary to dispose them in advance of the Fleet movement in the hope of gaining favorable opportunity to attack before or during the approach phase and possibly during the deployment and engagement.

6. The best defense against air attack is, of course, a successful attack against the ORANGE carrier before the aircraft are launched. This depends on early information; earlier than ORANGE can have of BLUE by the amount of time necessary to get the aircraft to the objective. In the circumstances this is highly improbable, so that in the initial stages attacks against his carrier are not considered as a primary objective. Later opportunities to damage his carrier must be grasped. The best defense against early enemy bombing attacks will be the establishment of strong protector groups covering our heavy units.

7. The maintenance of our own BLUE air spot, especially in the favorable range band from 22,000 to 28,000 yards, is highly desirable, so that protection for BLUE spotters will be necessary.

8. To deny enemy surface vessels laying smoke to interfere with our gun fire. For this we have our light and heavy cruisers.

9. There are no mine vessels available capable of maintaining Fleet position, so the question of tactical mining does not arise. The mine divisions of the TRUK base force will maintain the integrity of the mine fields and will provide sweeping operations for our sortie.

With the above considerations in mind, the following tasks are formulated:

1. Search and tactical scouting operations to determine enemy position, movement and disposition.

2. Anti-submarine screening of main body.

3. To engage enemy capital ships at extreme and favorable long gun ranges establishing priority of effective fire, retiring as necessary to maintain favorable long range, then close for decisive engagement.

4. To make a determined and coordinated air and light force attack when properly supported by battle line fire, and when battle lines close to decisive engagement.

5. To maintain own plane spot, and to secure local superiority in the air in the battle area.

6. To deny ORANGE laying smoke to interfere with our battle line gun fire.

7. To attack enemy battle line carrier and cruisers at every opportunity.

Having in view the foregoing tasks and considering the normal organization of the Fleet for battle, the necessary groups and the assigned tasks are as follows:

- (a) Battle Line - - - - - Task 3
- (b) Light Forces - - - - - Tasks 4, 6
- (c) Air Squadrons - - - - - Tasks 1,2,4,5
- (d) Submarine Divisions - Tasks 1,7
- (e) Anti-submarine Screen - Task 2.

Command Organization.

- (a) Battle Line, Vice Admiral S.
Batdiv Two.
Anti-Submarine Screen
Desdiv Twelve.
- (b) Forces in the Center, Rear Admiral BFC.
CA-26 (Flag Crudiv 4)
Crudiv Nine.
DL-5 (Comdesrons)
Desron One.
- (c) Forces on Right Flank, Captain BRF.
CA-27 and CA-24.
Desron Five.
- (d) Forces on Left Flank, Captain BLF.
CA-25 and CA-28.
Desron Three.
- (e) Aircraft, Captain BA.
CV-4.
VP-8.
- (f) Submarines, Commander TS.
Subdivs One and Two.
- (g) TRUK Defense Forces, Captain BTD.
CM-Four.
Mindiv Two plus six AM.
All Train vessels.

Coordinating Measures.

Cruise, approach and deploy in accordance with plan.

Major objective to be ORANGE capital ships, carrier and cruisers.

Logistic Support.

None.

Special Provisions.

(a) A suitable communication plan is issued as Communication Plan #1.

(b) The Operation Order and Battle Plan, with necessary Annexes, must be distributed to all combatant units and to the Base Force Commander.

(c) Radio silence is necessary except for "Urgent Priority" messages, which may be in plain language or contact code.

(d) Sortie plans are available in the hands of the various Commanders. Other necessary plans will be issued.

(e) Commander Escort acting as O.T.C. will be in his Flagship, BB-40.

(f) Rendezvous will be at TRUK.

(g) Minus ten time will be used.

THE OPERATION ORDER. (Requirement 5)

Op/38/14
SECRET

BLUE Covering Group
BB-40, Flagship.

Operation Order
No. 1.

TRUK,
14 August 19--: 1900

TASK ORGANIZATION.

- (a) Main Body.
 - Batdiv Two.
 - Desdiv Twelve.
- (b) Forces in the Center, Rear Admiral BFC.
 - CA Twenty-six.
 - Crudiv Nine.
 - DL Five.
 - Desron One less Desdiv Three.
- (c) Forces on Right Flank, Captain BRF.
 - CA Twenty-seven and CA Twenty-four.
 - Desron Five.
- (d) Forces on Left Flank, Captain BLF.
 - CA Twenty-five and CA Twenty-eight.
 - Desron Three.
- (e) Aircraft, Captain BA.
 - CV Four, Desdiv Three.
 - VP Eight.
- (f) Submarines, Commander TS.
 - Subdivs One and Two.
- (g) TRUK Defense Forces, Captain BTD.
 - CM-Four.
 - Mindiv Two plus Six AM.
 - All Train vessels.

1. An ORANGE detachment, enumerated hereunder, was sighted about one hundred and fifty miles North of TRUK at noon today and about two hundred miles Northeast of Northeast Pass at about seventeen hundred proceeding at moderate speed on Northeasterly course. ORANGE planes have been seen to reconnoiter TRUK during the day. It is assumed that this ORANGE force has a mission to destroy BLUE escorting forces in order to interrupt BLUE line of supply.
 - Four BBs of the earlier ORANGE type
 - Three CCs
 - Four MYOKOS
 - Four KAKOS
 - Two Squadrons of DDs, one squadron of DLs, each led by a CL
 - One CV of large fast type
 - Eight Fleet Submarines.
2. This force will destroy the ORANGE force threatening Convoy Seven by engaging it decisively in a fleet action with all available forces in order to assure the early arrival of Convoy Seven at MANILA.
3. (a) Main Body underway at such time that Flag will pass Point Affirm at zero five zero zero fifteen August.
(b) Forces in the Center be on station assigned by cruising disposition Number Two R when Flag passes Point Affirm (Annex A).
(c) Forces on Right Flank be on station assigned in cruising disposition Number Two R when Flag passes Point Affirm (Annex A).

(d) Forces on Left Flank be on station assigned in cruising disposition Number Two R when Flag passes Point Affirm (Annex A).

(e) Aircraft VP Eight scout in accordance with Scouting Plan Number One (Annex B) Maintain contact. Concentrate and attack enemy battle line when directed. CV-Four maintain anti-submarine patrol ahead of Main Body during sortie and while cruising. VS Squadron scout tactically ahead and on advanced flanks to radius of one hundred miles when directed. Carry out aircraft Cruising Plan Twelve.

(f) Submarines be on stations assigned in Cruising Disposition Number Two R (Annex A) when Fleet Flag passes Point Affirm. Maintain stations at best cruising speed. Attack enemy capital ships, carrier and cruisers, primary objective enemy capital ships.

(g) TRUK Defense Forces establish off shore patrol covering approaches to Northeast Pass during present operations. Maintain clear channel through Northeast Passage and Points Affirm to X-ray. Provide reservicing facilities for aircraft.

(x) Sortie Plan Number Two-S, zero hour zero five zero zero fifteen August. Cruising Disposition Number Two R (Annex A). Point of Origin Latitude seven degrees thirty five minutes North; Longitude one hundred fifty two degrees three minutes East. Fleet Guide, Flagship of Main Body, pass Point Affirm at zero five zero zero fifteen August. Fleet course zero forty five. Speed fifteen. Use zigzag Plan Number Four or Number Five on signal. Condition of readiness for action Two. Rendezvous TRUK. Use minus ten time.

4. Train ships and convoy remain at TRUK.
5. Maintain radio silence. Urgent priority messages in clear. Commander Covering Group, O.T.C. in BB-Forty with Main Body.

S
Vice Admiral, BLUE Navy
Commanding BLUE Covering Group.

ANNEXES

- A. Cruising Plan No. 2 R.
- B. Scouting Plan No. 1.
- C. Sortie Plan No. 1 (not reproduced).
- D. Communication Plan No. 1.

Distribution

By Special Boat to all
Task Group Commanders, Unit Commanders
and Commanding Officers.

OK
Commander, BLUE Navy
Flag Secretary.

THE BATTLE PLAN (REQUIREMENT NO. 2)

SECRET

BLUE Escort Force
BB-40, Flagship.

Battle Plan
No. 1

TRUK
14 August, 19--.

TASK ORGANIZATION

(a) Battle Line.

Batdiv Two.
Desdiv Twelve.

(b) Forces in the Center, Rear Admiral BFC.

CA-Twenty-six.
Crudiv Nine.
DL-Five.

Desron One less Desdiv Three.

(c) Forces on Right Battle Flank, Captain BRF.

CA Twenty-seven and CA Twenty-four.
Desron Five.

(d) Forces on Left Battle Flank, Captain BLF.

CA-Twenty-five and CA Twenty-eight.
Desron Three.

(e) Aircraft, Captain BA.

CV-Four.
Desdiv Three.
VP Eight.

(f) Submarines, Commander TS.

Subdivs One and Two.

1. Mission. To destroy the ORANGE Force threatening Convoy Seven in order to assure the early arrival of Convoy Seven at MANILA.

Information. Air scouting on the fourteenth of August has developed an ORANGE Force in the vicinity of TRUK consisting of four BBs, three CCs, four CAs of the MYOKO class, four CAs of the KAKO class, two squadrons of DDs of twelve ships each, one squadron of DLs of twelve ships, each squadron led by a light cruiser of the smaller class and eight fleet type submarines. This force was last seen at seventeen hours two hundred miles Northeast of TRUK steaming northeasterly at moderate speed.

Assumptions.

1. That this ORANGE Force is on a mission to destroy BLUE escorting forces in order to interrupt our lines of supply.
 2. That ORANGE will reverse course early during the night and seek an engagement with BLUE.
 3. That ORANGE will seek a daylight action on August fifteenth from a windward position using smoke when desirable or advantageous and closing the range as rapidly as possible to decisive range.
 4. That ORANGE may employ his CCs as a detached wing.
 5. That ORANGE will attack with submarines during main engagement.
 6. That visibility conditions will permit gunfire at extreme ranges.
2. This force will seek an early and decisive day engagement by engaging initially at extreme and favorable long ranges by employing light forces initially to defend own battle line then by closing battle line range making coordinated attack with all forces in order to destroy ORANGE force threatening Convoy Seven.

3. (a) Battle Line engage enemy capital ships at extreme and favorable long gun ranges between twenty two thousand and twenty eight thousand yards establishing priority of effective fire then close engagement on signal for general attack.
(b) Forces in the Center during approach drive off enemy light forces. Join light forces in own van upon deployment.
(c) Forces on the Right Battle Flank defend right flank own battle line. Deny enemy surface vessels laying smoke to interfere with our battle line gunfire. When battle line closes for decisive engagement attack enemy battle line when directed.
(d) Forces on the Left Battle Flank defend left flank own battle line. Deny enemy surface vessels laying smoke to interfere with own battle line gunfire. When battle line closes for decisive engagement attack enemy battle line when directed.
(e) Aircraft. CV-Four maintain favorable flying position on disengaged side and beyond visibility of battle area. After contact maintain tactical scouting. Provide information of enemy movement. Defend battle line against enemy air attacks. Provide relief spotters for battle line. Establish anti-submarine patrol around battle line. Establish local air superiority in battle area. Defend own battle line spotters. When battle line closes for decisive engagement attack enemy battle line with torpedoes and bombs, coordinate attacks with attacks of light forces, primary objective van enemy battleships.
(f) Submarines. Attack enemy capital ships, carrier, and cruisers upon every opportunity. Primary objective capital ships.
(x) O.T.C. will initiate attacks by air and light forces which will normally be withheld until close action is ordered. Air and Light Force commanders may use smoke at discretion when delivering attacks on enemy battle line but otherwise smoke will not be used except as ordered by O.T.C. The order for close action will be initiated by O.T.C. Pursuit will be initiated by O.T.C. who will direct the plan to be used. VS planes of cruisers, except one each for spotting, will coordinate with carrier aircraft to defend battle line spotters, and attack enemy submarines threatening own battle line.
4. - - - - -
5. O.T.C. in BB-Forty. Use Battle Communication Plan No. One (Annex D, Operation Order No. One).

S
Vice Admiral, BLUE Navy
Commander BLUE Escort Force.

ANNEXES:

- (A) Approach Disposition No. 25.
(B) Battle Disposition Plan No. 1.
(C) Communication Plan - Annex D to Operation Order No. 1.

Distribution:

By Special Boat to all
Task Group Commanders, Unit Commanders
and Commanding Officers.

B
Commander, BLUE Navy
Flag Secretary.

2783-D
9-21-32

TACTICAL PROBLEM II-1934-SR.

BLUE

COMMUNICATION PLAN NO. 1

ANNEX D TO OPERATION ORDER #1 (Requirement #8)

	275	465	545	585	2100	2385	2515	2575	2605	2655	2850	2885	2915	2945	4100	4500
OTC	x				x			x							x	x
ComBatDiv 2	x					x		x								
ComCrudiv 4	x			x				x				x			R	
ComCrudiv 9	x			x				x						x	R	
Comaircraft	x		x	x				x							x	
Comdesrons	x	x						x							R	
CA-25	x							x				x			R	
CA-27	x							x			x				R	
Comsubdivs																x
Batdiv II						x										
Crudiv 4													x			
Crudiv 9														x		
Comdesron 1		x							x							
Comdesron 3		x					x					x				
Comdesron 5		x								x	x					
Desron 1									x							
Desron 3							x									
Desron 5										x						
Aircraft CV-4			x													
Comdesdiv 12		x		x												
Desdiv 12				x												
Submarines																x
VP-8															x	
VS-9 VS-10				x												
TRUK.															x	

x - Two way communication

R - Receives only

Spotting circuits as per U.S. Fleet Instructions.

