25, D.C.

17 June 1947

TOP SECRET

From: Vice Admiral C. A. Lockwood, USN.
To: Chief of Naval Communications.

Subject: Communication Intelligence against the Japanese in World War II.

Enclosure: (A) Statement as to value of subject activity.

1. I am enclosing herewith a statement as to the value of communication intelligence against the Japanese in World War II.

2. I feel that this is a very modest outline and that there are undoubtedly a very great number of incidents and examples which time and memory have obliterated. However, I hope that there will be no thought of curtailing the operations of this activity, or of eliminating research and training in peacetime of a facility which must of necessity be immediately available on the approach of war.

C. A. LOCKWOOD
CONTRIBUTION OF COMMUNICATION INTELLIGENCE
TO THE SUCCESS OF SUBMARINE OPERATIONS AGAINST
THE JAPANESE IN WORLD WAR II.

The contribution to the defeat of Japan in World War II by United
States submarines is a matter of record. More than two-thirds of the
entire Japanese merchant marine and numerous warships, including some
of every category, were sunk. These sinkings resulted, by mid-1944, in
isolation of Japan from her overseas sources of raw materials and petroleum,
with far reaching effects on the capability of her war industry to produce
and her armed forces to operate. Her outlying bases were weakened by lack
of reinforcements and supplies and fell victim to our air, surface and
amphibious assaults; heavy bombers moved in to the captured bases and
decimated and demoralized the Japanese to the point where they were forced
to accept unconditional surrender. These effects of submarine operations
have been substantiated, both from Japanese and Allied official records,
and for the most part have been made public in detail, but nothing has been
told about the manner in which such outstanding results were achieved by
such a relatively small submarine organization.

As Commander of the Submarine Force, U. S. Pacific Fleet, from February,
1943, through the end of hostilities, I can vouch for the very important
part which Communication Intelligence played in the success of the submarine
campaign. Through intercept, cryptanalysis and translation of Japanese
messages, Communication Intelligence supplied the Submarine Force with a
continuous flow of information on Japanese naval and merchant shipping,
convoy routing and composition, damage sustained from submarine attacks,
anti-submarine measures employed or to be employed, effectiveness of our
torpedoes, and a wealth of other pertinent intelligence.

The Submarine Force Operations Officer was designated the Combat Intel-
ligence Officer. He was given access to all of the Communication Intelli-
gence files and through him information was furnished to the Force Commander
and thence to the individual submarines concerned. A private telephone was
installed between Subpac operations office and the combat intelligence
center of JICPOA so that information on convoy routing could be supplied
with a minimum of delay. Special internal codes, carried only by submarines,
were used for relaying this type of information, so that our own surface
ships, though they might be able to decipher the submarine messages, were
unable to determine the type of information being supplied. When ComSubpac
moved his operational headquarters to Guam a special cryptographic chan-
nel was authorized by OpNav to supply this information direct from JICPOA at
Pearl Harbor.

The information furnished made possible the assignment of submarines
not only to the most profitable patrol areas but also to specific locations
at particular times where contacts were made with convoys of known composi-
tion and importance, and frequently with enemy course and speed known exactly.
Combatant units of the Japanese Fleet were similarly located on many occa-
sions. During periods, which fortunately were brief, when enemy code changes
temporarily cut off the supply of Communication Intelligence, its absence
was keenly felt. The curve of enemy contacts and of consequent sinkings
almost exactly paralleled the curve of volume of Communication Intelligence

Enclosure “A”
available. There were many periods when every available submarine on patrol in the Pacific Ocean Area was busy on information supplied by Communication Intelligence. The vast reaches of the Pacific Ocean could not otherwise have been covered so thoroughly unless a far greater number of submarines had been available. In early 1945 it was learned from a Japanese prisoner-of-war that it was a common saying in Singapore that you could walk from that port to Java on American periscopes. This feeling among the Japanese was undoubtedly created, not by the great number of submarines on patrol, but rather by the fact, thanks to Communication Intelligence, the submarines were always at the same place as Japanese ships.

Regulations required that messages containing Communication Intelligence be destroyed, and as a consequence, no record of the many successes due to this intelligence can ever be compiled. However, some of the more notable achievements come immediately to mind:

Severe damage to carrier HITAKA (or HIYO) by TRIGGER in June, 1943, which put her out of commission for almost a year.
Sinking of aircraft transport MOGAHIGAYA by FOXY in August, 1943.
Sinking of escort carrier CHUYO by SAILFISH in December, 1943.
Sinking of submarine I-42 by TUNNY in March, 1944.
Decimation of large Saipan-bound convoy by PINTADO and SHARK II just prior to our landings on that island.
Sinking of submarine I-29 by SAWFISH in July, 1944.
Sinking of submarine I-41 by SEA DEVIL in September, 1944.
Sinking of escort carrier JIMBO by SPADSFISH in November, 1944.
Sinking of carrier UNRYU by REDFISH in December, 1944.
Severe damage to carrier HAYATAKA (or JUNYO) by REDFISH and/or SEA DEVIL in December, 1944, which put her out of commission for remainder of war.
Sinking of submarines RO-115, RO-112 and RO-113 by BATFISH within four days in February, 1945.
Sinking of submarine RO-56 off Wake Island by SEA OWL in April, 1945.
Sinking of light cruiser ISUZU by CHARR in April, 1945.
Contact and trailing of YAMATO task force by THREADFIN and HAKELEBACK in April, 1945, which resulted in sinkings the following day by carrier air forces of the battleship YAMATO, the cruiser YAHABE, and destroyers HAYAKAZE, ISOKAZE, ASASHINO and KASUMI.

The above are but a few of the many successes against the Japanese Navy that can be directly attributed to Communication Intelligence. The sinkings of Japanese merchant ships resulting from Communication Intelligence ran into hundreds of ships and probably amounted to fifty percent of the total of all merchantmen sunk by submarines.

In addition to the direct results there were equally as important indirect results which must be credited to the same source of information. For example: From an analysis of Communication Intelligence extending over a period of many months it was determined that our magnetic torpedo exploders were not functioning properly, and steps were taken to correct the defects. Then again, information concerning enemy minefields was so complete that
defensive minefields laid down by the enemy served our purpose rather than his. Not only were our submarines able to avoid the areas of danger, but Japanese ships, being required to avoid them as well, were forced into relatively narrow traffic lanes, making it easier for the submarines to locate and attack them. It is impossible to estimate the number of our submarines which were saved and the number of Japanese ships which were lost because of the accurate information about enemy minefields supplied by Communication Intelligence. Also, information concerning names of ships sunk, nature of cargo and number of troops lost was of inestimable value in assessing damage sustained by the enemy and gauging his capabilities.

Without Communication Intelligence submarine operations would unquestionably have been far more difficult and costly because of the vast areas which had to be covered and the attainment of the ultimate objectives would have been greatly delayed.
Subj: Exploitation of Communication Intelligence by Submarines.

1. In a message sent to Commanders in Chief all Fleets and Commands, concerned with escort and anti-submarine operations by Japanese Naval General Staff, on 5 June, it was stated that losses of merchant vessels during May totaled 225,000 tons, of which 212,000 tons were lost because of submarine action. This was an increase over the previous month. Seven anti-submarine vessels (including 3 destroyers) were sunk during the month.

2. The enclosed are two rather interesting curves bearing upon the above situation, which have been prepared here. The first represents a correlation between convoy reports decrypted and tonnage sunk (as estimated by OWI); the second represents a correlation between all traffic decrypted by Op-20-G and the tonnage sunk. The relationship in these curves is very marked. It is presumed that the rise in tonnage sunk over the traffic decrypted in the latter part of the periods covered is a result of better exploitation of the information.

J. N. WENGER
Op-20-G-1.
MONTHLY COMPARISON OF JAPANESE SINKINGS IN TONNAGE (1000 TON SHIPS OR LARGER) WITH THE AVAILABILITY OF CURRENT JAPANESE CONVOY REPORTS RECOVERED CRYPTOANALYTICALLY.
MONTHLY COMPARISON OF JAPANESE SINKINGS IN TONNAGE
(1000 TON SHIPS OR LARGER) WITH THE NUMBER OF TRANSLATIONS
OF JAPANESE NAVY SECRET MESSAGES RECOVERED CRYPTANALYTICALLY

\[\text{NUMBER OF TRANSLATIONS} \]

MAY | JUNE | JULY | AUG | SEPT | OCT | NOV | DEC | JAN | FEB | MAR | APR
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1943 | 1943 | 1943 | 1943 | 1943 | 1943 | 1943 | 1943 | 1943 | 1943 | 1943 | 1943

1944 | 1944 | 1944 | 1944 | 1944 | 1944 | 1944 | 1944 | 1944 | 1944 | 1944 | 1944

TOP SECRET-ULTRA