FY46

TOP SECRET

[redacted]
7102054

ARMY SECURITY AGENCY

WASHINGTON, D. C.

SUMMARY ANNUAL REPORT

OF THE

ARMY SECURITY AGENCY

FISCAL YEAR 1946

Prepared under the Direction of

CHIEF, ARMY SECURITY AGENCY

31 July 1947

WDGAS-13

TOP SECRET

[redacted]

7102054

HISTORICAL NOTE

This Summary Annual Report, FY 46, of the Army Security Agency is based upon a careful reading of the Summary Annual and Annual Reports of all the divisions, branches, and field units of the Agency for the fiscal year ending 30 June 1946, together with pertinent material from the files of the Chief of Communications Research relating to coordination and liaison. In his approach to the problem of compressing an account of the global activities of the Agency in 38 pages, the writer has organized his material in accordance with the principal functions performed. In order to satisfy security requirements and at the same time avoid restricting distribution unnecessarily, certain items of text and certain exhibits having to do with production and achievements of the Agency in the signal intelligence field in the Fiscal Year 1946 were prepared separately for a Supplement to this Summary Annual Report.

Historian, AS-13
31 July 1947

[redacted]

TABLE OF CONTENTS

LIST OF EXHIBITS

5

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

SUMMARY ANNUAL REPORT OF THE

ARMY SECURITY AGENCY

FISCAL YEAR 1946

I. THE PERIOD 1 JULY 1945 TO 14 AUGUST 1945

With the cessation of active military operations after V-J Day, the period of expansion in the activities of the Army Security Agency came to an end and attention was directed toward problems of readjustment and reorganization. The opening of the Fiscal Year 1946 found the Signal Security Agency organized into four major divisions: Security, Intelligence, Operating Services, and Personnel and Training (Tab 1). Besides these, and directly responsible to the Commanding General, Brigadier General W. Preston Corderman, were Arlington Hall Station, the Agency Fiscal Office, the Control Office, and the Office of the Director of Communications Research. General Corderman was also in direct command of the Second Signal Service Battalion, which included all the enlisted personnel of the Agency in the United States and overseas.

The funds of the Agency were procured, as they had been throughout its entire history, through the Office of the Chief Signal Officer. More than nine million dollars of Agency funds were obligated during the fiscal year, of which sum more than seven and a half million dollars was spent for payment of personnel, (Tab 2b), as compared with fourteen and a half million dollars spent for all purposes in the previous year.

[redacted]

010

As the period 1 July to 14 August 1945 was a period of war, the Signal Security Agency was operating on a full wartime basis, concentrating its efforts on the struggle in the Pacific. It was still necessary for the Agency to keep a steady flow of cryptographic materiel moving to troops in the field, and it was urgent that all intelligence possible be derived from the great volume of Japanese traffic that was being sent from the intercept stations to Arlington Hall for study. The approach of victory heightened the interest in this traffic until the receipt of the message -- the announcement by the Japanese of their acceptance of unconditional surrender.

After the end of the War in Europe (8 May 1945) the personnel strength of the Agency remained for a time comparatively constant at around 10,500 (Tab 3). A decline in military strength was compensated for by a slight rise in the number of civilian employees. There was, however, a mounting increase in resignations among civilians (Tab 4), including many highly qualified persons difficult to replace, and, while an equal number of new employees were recruited, they were, of course, untrained and by no means adequate as replacements for the personnel lost.

In addition to the signal intelligence services assigned to the headquarters of the European, Pacific, China, and Burma-India theaters, and therefore not under the direct control of the Signal Security Agency, the Agency maintained five monitoring detachments in the continental United States and five such

detachments overseas — all units of the Second Signal Service Battalion. The overseas detachments had a total of 629 officers and men[1].

Although the end of the Japanese war was not immediately expected in July 1945, it was evident at that time that, with the defeat of Germany, the Allies would be in a position to bring all their military power to bear on the Japanese and that this would soon bring about the end of the War. Post-war planning was instituted, therefore, early in the fiscal year, beginning with plans for research and development (Tab 5). The SSA Post-War Planning and Coordination Officer, Captain W. M. Baird, on 31 July recommended to the SSA Council the formation of a Post-War Planning Board, representing all divisions of the Agency. This recommendation was accepted, and the Board was established by Office Order No. 49, 4 August 1945 (Tab 6). At a Council meeting, held on 14 August 1945, General Corderman referred to the Board the problem of reduction in personnel, discharge of high-point enlisted men, and curtailment of the development and procurement programs. The Board scarcely had time to meet before the war ended.

II. AFTER V-J DAY

The change in orientation brought about by the ending of the war was for the Signal Security Agency less drastic than

---

1. Included were: Asmara 75; Fort Shafter, Hawaii 270; Amchitka 88; New Delhi 53; and Guam 143.

for many other military establishments, for the gathering of intelligence proceeds in peacetime as well as in wartime. While the specific problems of intelligence and security after V-J Day differed from those preceeding it, the over-riding mission of the Agency remained essentially the same.

A. The Need for Integration of Signal Intelligence Activities

From December 1944[2] the Signal Security Agency had operated under the dual control[3] of the Chief Signal Officer, who directed the technical and administrative phases of the work, and of the Assistant Chief of Staff, G-2, who exercised operational control and assigned missions. The arrangement gave rise to numerous problems of jurisdiction and responsibility and became the subject of considerable discussion among the Staff of the Signal Security Agency, the Chief Signal Officer, and Assistant Chief of Staff, G-2. Finally, on 22 August 1945, the Chief of Staff sent a message (Tab 7) to the Commanding Generals of all overseas theaters notifying them that all signal intelligence and signal security activities, including the Signal Security Agency and the 2d Signal Service Battalion, would be placed under the command of the War Department. Direct command was to be exercised by the Chief, Military Intelligence Service. On

---

2. Memo DCofS for ACofS, G-2 and CSigO, 10 Dec 44, sub: Signal Security Agency and the 2d Signal Service Battalion.

3. A third control over the Agency was exercised by the Military District of Washington.

28 August 1945 the Chief, MIS sent another message to the theaters (Tab 8) announcing the establishment, under the command of General Corderman, of the Army Security Agency, directing that the theaters make a radio report to the Army Security Agency of all Signal Intelligence units and personnel.

B. Establishment of the Army Security Agency

The Army Security Agency was formally established by a secret letter, dated 6 September 1945, from the Adjutant General to the Commanding Generals of the Air, Ground, and Service Forces and the Commanding Generals of all overseas theaters (Tabs 9 and 9a), which gave to the Chief, Army Security Agency responsibility for the

> Organization, employment, and operation of communications intelligence and communications security establishments, procedures, and equipment within the Army, exclusive of Message Centers.

All arrangements that had been made between the Signal Security Agency and the Military Intelligence Service prior to the establishment of the Army Security Agency and all policies of the Military Intelligence Division applicable to the Signal Security Agency were continued in force (Tab 10), but new problems arose. The Signal Security Agency had been provided with many services by the Army Service Forces for which it was now necessary to arrange new channels[4]. In addition, the Signal Security Agency had been authorized to issue letters and directives

---

4. ASA Council Min(S) 25 Sep 45.

on ~~signal~~ intelligence matters in the name of and by the authority of the Chief Signal Officer[5]. An arrangement was made whereby ~~such~~ letters ~~on command policy~~ dealing with policy were to be forwarded ~~through~~ the Assistant Chief of Staff, G-2 for transmittal to The Adjutant General ~~for approval and~~ for signature, while matters of technical routine were to be handled directly by the Army Security Agency in the name of The Adjutant General (Tab 11).

C. Reorganization of the Agency

A reorganization of the Agency was made necessary by its new independent status. Several plans for a new organization (Tabs 12, 13, 14) were drawn up by the Plans and Policy staff, which had been created on 25 September 1945 expressly for this purpose (Tab 15). Finally a plan was adopted and published in General Order #1, Hq. ASA, 23 November 1945 (Tabs 14, 16).

The new structure provided for a Chief of the Army Security Agency (WDGSS-10),[6] an Assistant Chief, Staff (WDGSS-20), and an Assistant Chief, Operations (WDGSS-60. General Corderman remained Chief, Army Security Agency, while the positions of Assistant Chief were filled by Colonel George A. Bicher for Staff and Colonel Harold G. Hayes for Operations (Tab 17).. All Staff sections were united under the Assistant Chief, Staff. Toward the end of the Fiscal Year the Director of Communications

---

5. ASA Council Min(s) 2 Oct 45.

6. On 11 June 1946 instructions were received in WD Memo 850-46, sub: Office Symbols, changing the designations WDGSS to WDGAS.

Research was placed under the Staff as Chief, Communications Research Section[7]. The operating divisions (Research and Development, WDGSS-70; Security, WDGSS-80; Intelligence, WDGSS-90) and independent branches (Personnel and Training, WDGSS-61; Supply, WDGSS-62) came under the Assistant Chief, Operations, WDGSS-60 (Tab 14). The organization remained substantially as set up until the end of the year. General Corderman was relieved of command on ~~10~~ 1 Apr 46 (G.O. 10, 1 Apr 46) April 1946 and Colonel Hayes became Chief, Army Security Agency. At this time the office of Assistant Chief, Operations was abolished, and Colonel Bicher became Deputy Chief, Staff.

D. Adjustments in Personnel Strength

Immediately following V-J Day Agency strength dropped sharply (Tab3). While the military personnel could not resign, as could the civilians, the rapidly lowering discharge criteria caused the Signal Security Agency to lose large numbers of officers and enlisted men and women as well as civilians and, during the greater part of the year, made it difficult for the Agency to carry on all its functions. Especially hard hit were the War Department and Theater monitoring stations, which in some instances were compelled to close down operations for lack of operators (see Annual Reports, FY 46, of monitoring stations, ASA, Europe, and ASA, Pacific). While Arlington Hall Station itself was not hit so hard, the shortage, especially of officers, made necessary numerous additional duty assignments. At one

7. This was later simplified to Chief, Communications Research.

time, for example, the Post Adjutant, Arlington Hall Station, was Personal Affairs Officer, Legal Assistance Officer, Civilian Personnel Officer, Army Emergency Relief Officer, and Post Signal Officer.

The loss of military personnel at Arlington Hall would have been far more crippling had not many former officers and enlisted persons returned to their old jobs as civilians. This personal "reconversion" provided the Agency with most of its present operating leadership, including the heads of the three major divisions, all of whom had been with the Agency for many years.

Inasmuch as the Army as a whole was in much the same predicament as the Signal Security Agency as regards personnel, it was very difficult for the War Department to accede to the many requests made by the Agency for replacements. The first troop basis set up for the Army Security Agency as an independent organization,[8] called for 579 officers and 6978 enlisted men. As is shown in Tab 18, the actual military strength of the Agency at no time during the year approached this figure. Several requests were made to the War Department for additional men to replace those leaving through the demobilization program, and finally, on 29 November 1945, a conference with the War Department Manpower Board and G-1 resulted in a total of 1944 men being transferred to the Agency from the Army Ground Forces.

---

8. 9 October 1945

These men, of course, to be effective, needed several months of training.

While the replacements were in training, it was necessary to place Agency specialists on the critical list, and this was done in Circular No. 31, 20 December 1945. The Army Security Agency was also given the highest priority on new personnel, this priority to be effective until 28 February 1946.

On 29 December 1945 The Adjutant General authorized a diversion to the Army Security Agency of 28 men per thousand of the Signal Corps replacement stream. This figure was raised to 87 per thousand in January and lowered to 67 per thousand by the end of June 1946. Some of these men were to be trained by the Signal Corps in the MOS 766, Radio Operator High Speed, Manual.

The loss of civilian employees closely paralleled the loss of military personnel (Tab 3), though the decline in civilian strength was much sharper immediately after the end of the War. Resignations, which had risen considerably after V-E Day, rose to an unexpected height, with more than 1250 persons leaving the Agency in the month of September 1945 alone. Total civilian strength dropped from 5720 in July 1945 to 2317 in June 1946, 4479 civilian separations being effected in the interval for all reasons. As can be seen from the graph, Tab 4, accessions during the latter part of the fiscal year nearly matched separations, thus making up, in numbers at least, for some of the losses.

It had been decided[9] that, when after the War reduction in force became necessary, it would be accomplished through the Civil Service procedure, that is, employees with the lowest ratings would be let out first, etc. Actually, however, voluntary resignations were so numerous that reduction in force affected only a very few persons, and the Agency found itself during most of the fiscal year well below its authorized civilian strength. Losses by attrition rather than reduction in force also meant that the Agency could not determine the specific personnel to be retained, and deprived the Agency of many skilled and highly desirable employees[10].

Particularly serious were the losses in technical specialists and engineers[11]. The great demand for these men in private industry and by other government agencies made their replacement a primary problem. The Research and Development Division attempted to meet the problem by a number of means. Scientific societies were contacted, advertisements were inserted in technical publications, and representatives of the Division went to 23 colleges and universities[12] to interview graduates of the

---

9. ASA Council Min(S) 31 July 1945.

10. ASA Council Min(S) 4 June 1946.

11. Annual Report, FY 46, R&D Division, pp. 8-14.

12. These were:

Colorado University	University of Wisconsin
Yale University	University of Illinois
Duke University	University of Minnesota
Ohio State University	University of North Carolina
Purdue University	University of Maryland

class of 1946. Two hundred ten students were interviewed and 61 were recommended as good prospects. However, no acquisitions were made when these people were graduated because new restrictions on the hiring of personnel had been put into effect by that time.

An additional problem posed by the loss of personnel, both military and civilian, was the scattering over the country of a large number of persons who were no longer under Agency control but who had considerable knowledge of Agency activities. A memorandum[13] was written calling attention to the problem, but nothing concrete was attempted. The Agency relied for security principally upon the discretion of its former employees and upon the security oath, which each was obliged to sign again upon separation from the Agency[14].

E. The Training Program

The large-scale replacement of experienced military personnel by untrained recruits or persons transferred from other branches necessitated the establishment of a training program

---

Agricultural and Mechanical College of Texas
Georgia School of Technology
Columbia University
New York University
Cornell University
Iowa State College
Brooklyn College
Massachusetts Institute of Technology
Virginia Polytechnic Institute
Illinois Institute of Technology
Pennsylvania State College
Carnegie Institute of Technology
University of Pittsburg

13. Memo for Chief, ASA, 13 November 1945, sub: Proper Public Relations.

14. This applied to the military as well as to civilians. The former, however, had not previously signed the oath.

on a large scale. The Adjutant General, on 19 November 1945, charged the Agency with responsibility for training specialists in fields peculiar to its work (Tab 19) and the next day transferred control of the school at Vint Hill Farms Station from the Signal Corps to the Army Security Agency (Tab 20).

While the Vint Hill Farms School had programs for training other specialists, such as cryptanalysts and traffic analysts, since the primary need was for intercept operators (SSN 799), emphasis naturally was placed on the training of such operators. Between 7 January 1946 and the end of the fiscal year 2169 students entered a 20-week training course for this specialty. Nine hundred seventy of these students were still in school on 30 June 1946 and only 206 had been graduated. Of the remainder, 598 had been transferred or discharged to reenlist in branches of their choice and 395 had failed[15].

The training of the student operators did not end when they left Vint Hill Farms Station; upon their assignment to monitoring stations, it was found necessary to give them a great deal of on-the-job training, and it was a complaint common to several stations that the new men sent to them were not capable of handling their assignments (see Annual Reports, FY 46, MS-7 and MS-9).

The cessation of large-scale civilian recruiting meant that it would no longer be necessary to train new employees on a mass basis. There were, however, some accessions, and the Civilian

---

15. Annual Report, FY 46, Vint Hill Farms Station.

Training School conducted courses for new personnel, principally in cryptography.

In addition to training new employees, it was necessary for the Agency to retrain several hundred persons, principally from the branches connected with the closed-out Japanese Army Problem, to enable them to take their places in new activities. This training, of a highly specialized nature, including languages and cryptanalytic techniques, was accomplished within the Cryptanalytic Branch of the Operation Division (see Annual Reports, FY 46, AS-93 and AS-90).

Another kind of training was in the thought of the leaders of the Agency during Fiscal Year 1946. It was recognized that cryptography and cryptanalysis were developing arts, and that if the Agency were to maintain its place of leadership it would necessarily have to make provision for recruiting the highest type of professional personnel. Once these people were employed, it would also be necessary to allow them intermittent opportunities to pursue further studies in their respective fields.

The original memorandum in the initiation of such a program was a staff study prepared by WDGSS-23 for the Assistant Chief of Staff, G-2 on 12 April 1946. This memorandum (Tab 21), which emphasized that assistance in the ASA research and development program should be obtained by contract with a wide variety of commercial concerns and with outstanding universities, was approved by Lieutenant General Hoyt S. Vandenberg by first indorsement on 25 April 1946 (Tab 21a). Subsequent comments by Research and Development Division indicated that steps in this direction

had already been taken (Tab 22). These comments and those of the Director of Communication Research (Tab 22a) portray the comprehensive difficulties which confront the Army Security Agency in broadening and strengthening its highly specialized field of research and development.

At the end of Fiscal Year 1946 definite plans were underway for recruiting and also for the active participation of R & D Division engineers in professional societies. Training as an adjunct to research and development contracts will be instituted as required.

F. Supply

When the War ended, the Signal Security Agency was in the midst of a large-scale procurement program for cryptographic materiel and research and development equipment. Most of the orders for the former were cancelled, but contracts were continued for research equipment if such contracts were 75 per cent completed by 30 August 1945. Procurement arrangements that had been in effect before the establishment of the Army Security Agency were maintained (Tabs 23 and 24), and the Chief Signal Officer continued to act for the Agency in supply and procurement matters. An agreement was reached whereby the Chief of the Agency could approve Research and Development contracts totaling less than $50,000, the approval of the Chief Signal Officer being necessary only for contracts in excess of that amount.

The level of supply activity dropped sharply after V-J Day, as indicated by the number of property issue slips prepared (Tab 25) and the value of purchase orders placed (Tab 26). It

remained low during the closing months of 1945, then began to rise in the Spring of 1946, but throughout the fiscal year it remained very substantially below the wartime figure.

The Fiscal Year 1946 was a year of shortages of material. Industry was engaged in reconversion, and industrial demand, coupled with the popular demand for the limited output of supplies and equipment, made delivery of needed items for research and development a very uncertain matter. Many orders were delayed for months before delivery (see Annual Report, FY 46, R&D Division).

III. MISSIONS AND ACHIEVEMENTS

The two major missions of the Army Security Agency, (1) maintaining the security of United States Army communications, and (2) intercepting and cryptanalyzing the communications of other nations to derive intelligence from them, were performed during the Fiscal Year 1946 by the Security Division and the Operations Division respectively. The Research and Development Division assisted both the other operating divisions by doing basic research on cryptological and engineering problems.

A. The Security Mission

When the War ended, the Army and other United States agencies using Army communications had offices and headquarters in all parts of the world, which were linked to Washington and to each other by cryptonets employing cipher machines (SIGABA), enciphered teletype (SIGCUM), and special strip ciphers. During the Fiscal Year 1946 four world-wide and three special purpose

nets were discontinued, and the others were revised to meet new conditions. For the most part, nets were consolidated to conform to the new theater organizations, and the number of headquarters serviced was greatly reduced. The status of the cryptonets in June 1946 is shown in Tab 27. Most of the wartime special systems were discontinued (Tabs 28 and 29).

The reduction in the number of holders of cryptographic systems and documents incident to the consolidation of nets and the shut-down of headquarters brought a tremendous quantity of materiel back to Arlington Hall for processing (Tab 30). The Registered Publications Section of the Materiel Branch noted a drop from 2185 active accounts in July 1945 to 514 by the end of the fiscal year (Tab 31). Nine thousand machines of various types were returned from the field, together with three thousand boxes of rotors, parts, and maintenance kits. All of this mechanical equipment had to be examined, cleaned, repaired, and prepared for storage. As there were not sufficient personnel available, much of this program was left uncompleted by the end of the year (see Annual Report, FY 46, Maintenance Branch, Security Division).

Not all of the effort of the Security Division, however, was expended on recovering and repairing old materiel. New production on a curtailed scale continued throughout the year (Tabs 32 and 33). The greatest single production job of the war in the communications security field was performed in the period between the opening of the Fiscal Year 1946 and V-J Day, when

the Agency was called on to supply Army forces in the Pacific with the Joint Pacific Aircraft Code, an Army-Navy document previously issued by the Navy to all holders. It was necessary, in addition to other production jobs, to print 20,000 copies a day of the 24-page code, an achievement made possible by operating all presses 16 hours a day and the larger presses 24 hours a day.

In addition to prescribing rules of communication security, the Army Security Agency is obliged to enforce them by monitoring friendly circuits and notifying the headquarters concerned of violations of security in their communications. At first it was proposed to eliminate security monitoring missions immediately after V-J Day. Accordingly, the Transmission Security Section, Methods Branch, was deactivated. It was revived, however, on 29 December 1945 (Tab 34) as part of the Protective Branch and reassigned the function of studying violations. A security mission was assigned to MS-1 at Vint Hill[16], and between 1 February and 15 June 1946 this station noted more than 16,000 violations of all types (Tab 35).

Shortly after the end of the War historical and technical surveys were made of all machine cipher systems that had been analyzed by the Methods Branch of the Security Division. The historical study covered the development of each machine involved, and the technical study dealt with its analysis and suggested

16. MS-1 was the only station used for the security-monitoring of War Department circuits during the Fiscal Year 1946.

improvements in its security. These surveys covered Converter M-134-C (SIGABA), Converter M-228 (SIGCUM), Converter M-228 (modified) (SIGHUAD), Converter M-294 (SIGMIN), Converter M-209, Combined Cipher Machine (CCM), Converter M-325 (SIGFOY), Converter M-409 (SIGGIG), and the Teletypewriter Subset 131-A1 with two transmiter distributors (SIGIBS). Similar historical and technical surveys were made of all codes previously analyzed by the Code Analysis Unit. They included studies of Map Coordinate, Brevity, Prearranged Message, Combat, Air Forces, Operations, Direction Finding, Aircraft Movement, Radio Telephone, Division Field, and Miscellaneous Codes (see Annual Report, FY 46, Methods Branch, p. 22).

Of equal importance with day-to-day activity and the recording of past work is planning for the future. The methods of cryptanalytical attack on all forms of communication have improved tremendously in the past few years, and it must be assumed that they will improve still further. To keep ahead of this advance in cryptanalysis requires a consistent cryptographic planning effort. A cryptographic plan was set up and put in operation during the fiscal year. Under its short title, SIGIRA, it included short- and long-range planning for both Air and Ground signal security, using as its basic principle the concept of the smallest possible number of systems to accomplish the desired security for each type of communications (see Annual Report, FY 46, Security Division Staff, p. 9).

One of the most interesting and significant trends in military communications during 1946 was the planning of secure equipment for low-echelon traffic for the Army Ground Forces and the Army Air Forces. In a conference held in the first part of 1946 with representatives of the Security Division and the Research and Development Division, the Army Ground Forces expressed the opinion that teletype, for example, should be used down to battalion level, if not to company level. Similarly, the Army Ground Forces was interested in secure speech devices for both wire and radio traffic suitable for use with forward troop elements. The Army Air Forces likewise was interested in lightweight secure devices that could be used in planes for air-to-air and air-to-ground communications: specifically, a teletypewriter to weigh no more than 25 pounds and a television set to weigh less than a hundred pounds, and also in encrypted identification equipment (IFF).

The suggested use of high-grade cryptographic devices in places of danger in the air and on the ground touched off a vigorous discussion of the problem of physical security versus the desirability of using strong cryptographic principles (Tab 36). It was recognized that when devices embodying such strong principles were used by low-echelon units the enemy would certainly capture some of them and thus might learn of principles of techniques that he had not yet discovered. Finally on 6 April 1946, an Army Security Agency policy was established for utilizing cryptographic principles to provide adequate security.* The subject of discussion continued into

* (Tab 36 - appd with emphasis on "adequate")

* see Pp. 34 & 35

Fiscal Year 1947.

Once the military characteristics of new equipment were agreed upon, the task of selecting principles and developing a device to incorporate them in such a way as to meet all requirements fell to the newly created Research and Development Division. Reversing the wartime trend in research, when most effort was spent on cryptanalytic study, the Research and Development Division now spends 65 per cent of its time and funds on cryptographic problems (see Annual Report, FY 46, R&D Division, P.20). While some research was done in anticipation of new demands, the bulk of the effort was directed toward devices for which firm requirements had already been received. Special attention was focused on secure speech and communication devices for the Army Ground Forces and for the Army Air Forces. Enciphered speech (Ciphony) circuits and enciphered facsimile (Cifax) circuits were developed during the year (Tab 37). Among the many interesting projects undertaken by the Research and Development Division are (1) the development of secure speech equipment that can be used with either wire or radio circuits, and (2) research into devices which would utilize printed circuits and miniature tubes and result in the replacement of the heavy, cumbersome converters now in use.

The Army Security Agency was removed from Signal Corps control at a time when new means of communication were being developed and new cryptographic needs were arising. Though duplication of effort had been avoided by making the Agency

responsible for means of cryptography as opposed to means of communication, inasmuch as the new developments were in the direction of integrated equipment with the cryptographic device as a basic part, the need for close liaison with the Signal Corps was obvious. After a series of discussions in which representatives of the Army Security Agency, the Military Intelligence Service, and the Signal Corps took part, a division of responsibility was finally arrived at. In a memorandum to the Chief Signal Officer, dated 5 January 1946 (Tab 38), the Assistant Chief of Staff, G-2 expressed the opinion that while the development of communications devices with integral cryptographic features should remain the responsibility of the Chief Signal Officer, the cryptographic principles themselves should be the responsibility of the Army Security Agency. He further stated that no hard and fast line could be drawn in this field and that only through the closest liaison between the Army Security Agency and the Signal Corps could this development problem be met. Such liaison with the Signal Corps is now carried on regularly by representatives of the Security Division and the Research and Development Division.

B. The Intelligence Mission

As the basis of all communications intelligence is interception, the Army Security Agency maintained, at the end of the Fiscal Year 1946, seven permanent monitoring stations, including one at Gross Gerau, Germany, under the administrative control

of Army Security Agency, Europe.[17] These stations in June 1946 forwarded to Arlington Hall a total of 113,691 intercepts, as compared with 735,590 received by the Agency in July 1945 (Tab 39). Behind this steep decline lies a story of personnel depletion exceeding anything ever experienced before by the Agency. One station, MS-5 in Hawaii, which in July 1945 had had a strength of 9 officers and 261 enlisted men, in February 1946 was down to 5 officers and 12 men, all engaged in maintenance, and it produced no traffic at all for the last few months of the year (Annual Report, FY 46, MS-5). Besides the shortage of trained operators, the monitoring stations had to contend with inadequate materiel (see Annual Reports, FY 46, MS-1, and MS-9), poor living conditions, (see Annual Report, FY 46, MS-2), and faulty location, where, because of weather conditions or geographic position, reception was bad (see Annual Reports, FY 46, MS-3 and MS-9).

Despite these obstacles, the monitoring stations performed some notable missions, including pioneering in new fields. The surrender of the Japanese Government, while it did not end Japanese military or diplomatic traffic, naturally was followed by a sudden drop in the number of circuits operating and the number of messages sent. By October and November 1945 the amount of Japanese traffic received was of little significance (see

---

17. The seven remaining stations were: USMS-1 (Warrenton, Va.), USMS-2 (Petaluma, Calif.), USMS-4 (Asmara, Eritrea), USMS-5 (Helemano, Oahu, T.H.), USMS-6 (Gross Gerau, Germany), USMS-7 (Fairbanks, Alaska), USMS-9 (Las Pinas, P.I.).

Tab 1, Summary Annual Report, ASA, Supplement, FY 46). By that time, however, new intelligence objectives were indicated and new search missions had been assigned, notably in Latin American, Chinese, and Russian traffic (for additional information see Annual Report, ASA, Supplement, FY 46). The monitoring stations intercepted this traffic as best they could and were able to provide the Agency with a large volume of messages (Tab 39).

An additional intercept problem was the increasing use of non-Morse means of transmission, which made necessary new and complex interception equipment (Tab 40). This problem was of special importance in regard to Russian traffic, as the Russians made use of multi-channel radio teletype, and ordinary receivers were useless. Work was begun on two-channel receivers capable of recording signals by cutting teletype tape and by the end of the year three such receivers were in service in the field. Previous multi-channel receivers recorded signals on tape as an undulating line, which had to be "read" and transcribed by hand.

Responsibility for traffic analysis, which, before the end of the War, had been centered in the Traffic Analysis and Control Branch, was decentralized during the remainder of the fiscal year. Analysis of foreign diplomatic traffic was performed by the Intercept Control Branch, while military traffic was analyzed by the Cryptanalytic Branch. Each operating section of the Cryptanalytic Branch working on a major problem had its own traffic analysis unit, particularly notable results being

produced by the unit working on French military traffic[18].

The cryptanalytic activity of the Agency was probably affected more drastically by the end of the War than any other phase of operations. In July 1945, 1,731 military and civilian personnel were assigned to the Military Cryptanalytic Branch and 501 more to the Language Branch. All of these persons were primarily concerned with Japanese encrypted communications, which after V-J Day fell off to a mere fraction of their wartime volume. While large numbers of employees resigned or were transferred to other Government agencies, some remained, and it was possible to utilize their skill and experience in other cryptanalytic problems. Practically all these employees, after a period of retraining, were absorbed in the newly expanded fields of Chinese and Russian communications, though some were scattered through other problems such as the French.

Despite the opening up of new fields of operations and some remarkable individual achievements, the year was marked by a great decline in the number of messages decryptographed and a proportionate drop in messages published (see Tab 1, Summary Annual Report, Supplementary, FY 46, ASA). This drop is attributable to the decline in traffic and the scarcity of intercept operators. (For achievements in cryptanalysis, see Summary Annual Report, Supplementary, FY 46, ASA).

---

18. SOP, 1 Jun 45, par 24.5; SOP 12 Dec 45 Intelligence Division, par 1c (4) and par 1e (1); Annual Report, FY 46, AS-93.

Of all developments in the field of cryptanalytic production of intelligence, none is more significant than the increase in the use of machine techniques.[19] More than 400 IBM machines were in use in July 1945 (Tab 41). By December 1945 this number had dropped about 50 per cent, but there was continual improvement in the utilization of the machines retained. Moreover, important new machine techniques were developed during the fiscal year. Approximately 32 per cent of the cryptanalytic projects referred to the Machine Branch of Operations Division were connected with the Chinese and Far Eastern problem (Tab 42); more than 11 per cent originated in the Russian problem, and 9 per cent in the French problem. Twenty-seven per cent of all projects were from the Japanese problem and, for the most part, were referred during the first three months of the fiscal year.

Most of the effort expended on basic research during the fiscal year was put on the development of new intercept equipment (Tab 43), on the development of Rapid Analytical machinery other than IBM, and on the construction of analogues for foreign cipher machines. (Tab 43 a and b)

An incidental problem that arose after the end of the War was the storage of some 500 four-drawer filing cabinets full of classified papers dealing with Japanese Army and other traffic.

---

19. "The three most notable advances in IBM machine methods were the Transposition Solution, the Standard Group Index, and the Bookbreaker's Index." (Annual Report, FY 46, AS-92, p. 17)

The amount of space required for this volume of material made some Agency officials want to microfilm the documents or ship them to the New Cumberland vaults, but it was finally decided to find storage room for them at Arlington Hall.[20]

IV. ARMY SECURITY AGENCY FIELD UNITS IN THE THEATERS

The Army Security Agency, Europe and the Army Security Agency, Pacific were organized to perform signal intelligence and signal security missions for their respective theaters similar to those performed for the entire War Department by the Army Security Agency, WD. They are given War Department Missions from time to time, but their primary obligation is to their respective theaters (Tab 44).

A. Army Security Agency, Europe

The Army Security Agency, Europe was activated on 27 November 1945 at Frankfurt, Germany, then the headquarters of the United States Forces in the European Theater (USFET), with Colonel Earle F. Cook as Chief (Tab 45). Prior to the organization of ASA, Europe, signal intelligence and security activities in the European Theater had been carried on by (1) the Signal Intelligence Division of the Office of the Theater Chief Signal Officer, (2) the Signal Intelligence Section of the

---

20. ASA Council Min (TS) 30 October 1945.

Office of the Signal Officer, United Kingdom Base, and (3) Signal Security Detachment "D", Headquarters, United States Forces, European Theater. At the time the new organization was established, Signal Security Detachment "D" carried on the greater part of the work.

On 1 July 1945 there were, subordinate to the Signal Intelligence Division, Hq, USFET, 14 Signal Service companies, 10 Signal Radio Intelligence companies, and 3 Signal Security detachments (Tab 46). In August and September 1945 all Signal Service companies were deactivated, and by the time of the reorganization only three Radio Intelligence companies (114th, 116th and 118th) remained. On 2 January 1946 these were redesignated as Signal Service Companies. The 118th was assigned to the occupation forces in Austria, where it was disbanded on 15 March 1946 because of insufficient personnel. By the end of the fiscal year ASA, Europe, consisted of a headquarters at Frankfort, Germany and five operating units: the 114th Signal Service Company at Sontra, Germany; the 116th Signal Service Company at Scheyern, Germany; the 2nd AAF Radio Squadron Mobile at Bad Vilbel, Germany; the Signal Intelligence Service Division at Caserta, Italy; and Detachment "A" at Gross Gerau, Germany. Detachment "A" was deactivated on 1 July 1946 and reorganized under operational control of the War Department, exercised through the Army Security Agency, as MS-6 (Tab 47). The mission of ASA, Europe had been expanded on 13 February 1946 to include United States Forces in Austria and the Mediterranian Theater of Operations (Tab 48).

In the main, the problems of ASA, Europe paralleled those of the monitoring stations of the Agency. The increasing liberalization of discharge criteria made it ever more difficult to retain experienced personnel, and the lack of such personnel hampered operations. A series of administrative steps were taken to give the Chief, ASA, Europe more control over assignment, transfer, and promotion of signal intelligence personnel. All reenlistees who had served with Army Security Agency units were assigned on 12 December 1945 by the Theater to ASA, Europe (Tab 49), and the Chief, ASA, Europe was authorized on 13 December 1945 to promote and demote enlisted men within his command and to recommend company grade officer promotions to the Theater Headquarters and field grade officer promotions to the Army Security Agency, WD (Tab 50). In addition, the Theater was was directed on 29 December 1945 to transfer all Radio Traffic Analysts (709) and Radio Traffic Analysis Officers (9605) to the Army Security Agency (Tab 51). On 28 May 1946 the Theater was given the responsibility of supplying nontechnical personnel, while the War Department assumed responsibility of supplying the technical specialists to be trained by the Army Security Agency, WD (Tab 52).

For the performance of its mission, ASA, Europe was organized along lines similiar to those of the parent Agency (Tab 53). The security mission was mainly one of supplying cryptographic materiel to using organizations, of destroying or returning to Arlington Hall materiel surplus to theater needs, of maintaining

cryptographic machinery, and of monitoring theater circuits for breaches of security. (See Tab 54 for number of circuits monitored). Within the limits of available personnel, this mission was performed.

The intelligence mission was performed by the Intelligence Branch of Headquarters, ASA, Europe and the field units. Intercept operations were carried out on an extremely limited scale (Tab 55), most field units producing little or no traffic. The 114th and 116th Signal Service Companies spent most of their time building facilitites and training new personnel, but the intercept station at Gross Gerau did produce some intercepts during the fiscal year, an activity which tapering off after November 1945 (Tab 56). Both European military circuits and suspected German clandestine circuits were monitored.

There was very little cryptanalytic activity in the European Theater during 1946. Most traffic requiring cryptanalysis was sent back to the United States, although on 15 January 1946 the Chief of the Agency was authorized by the Assistant Chief of Staff, G-2 to assign the French military cryptanalytical problem to ASA, Europe.

Two special projects of some interest carried on by the Intelligence Branch of ASA, Europe were the TICOM and the Civil Censorship missions. The Chief, ASA, Europe was the TICOM representative of the United States in the Theater, and under his direction the archives of the Signal Intelligence Service of the Supreme Command of the German Armed Forces were located and

removed, and the Vierling library and laboratory were made use of. Many former members of German signal intelligence organizations were located and questioned by representatives of the Agency.

The Civil Censorship Division in Germany and Austria was provided by ASA, Europe with a small number of men to examine suspicious civilian mail for secret inks and possible cryptographed messages. This project was turned over in April 1946 to War Department civilians.

B. Army Security Agency, Pacific

The Army Security Agency, Pacific was activated on 25 November 1945 at Manila, Philippine Islands, with Lieutenant Colonel Abraham Sinkov as its first commanding officer (Tab 57). The advance echelon of the Signal Intelligence Service, United States Army Forces, Pacific, which, at the time of the activation of Army Security Agency, Pacific was already established in Tokyo, Japan, was continued in operation as the Liaison Office of ASA, Pacific at General Headquarters. The 111th and 126th Signal Service Companies and the 1st Radio Squadron Mobile were placed under operational control of ASA, Pacific after their reorganization, which was directed on 1 December 1945 (Tabs 58 and 59). In addition, the Commanding General, United States Army Forces, Western Pacific, (AFWESPAC) was directed to activate two Signal Service detachments (the 3377th and the 3378th) for assignment to ASA, Pacific (Tab 60). Effective

6 May 1946, Headquarters, ASA, Pacific was moved to Tokyo, leaving an administrative headquarters in Manila to distribute and account for cryptographic materiel (Tab 61). This administrative group was ordered on 22 June 1946 to move from Manila to Tokyo; thus at the end of the fiscal year the headquarters were united in Tokyo (Tab 62). The location and strength of units of ASA, Pacific are shown in Tab 63.

Besides being responsible for signal security and signal intelligence at General Headquarters, Pacific in Tokyo and at AFWESPAC, the Director, Army Security Agency, Pacific was made responsible for the Middle Pacific and China Theaters. A detachment of ASA, Pacific was activated in Hawaii on 31 January 1946 (Tab 64), and on 14 February 1946 responsibility for signal intelligence and communication security in the China Theater was assigned to Headquarters, ASA, Pacific[21].

ASA, Pacific was faced with the same personnel problem as that faced by ASA, Europe and the War Department monitoring stations. As shown in Tab 63, the operating companies had only a fraction of their authorized strength. The 3377th and 3378th Signal Service Detachments, which were authorized 39 and 58 enlisted men respectively, had no enlisted men at all by the end of the fiscal year. ASA, Pacific had 50 per cent of its authorized officers strength and 14.3 per cent of its allotted EM strength. This lack of sufficient personnel affected operations adversely at all levels.

---

21. WD Radio WX96960, 14 Feb 46.

An additional problem, imposed on ASA, Pacific by the size of its theater area, was communication with its own units. Unlike its European counterpart, which operated on a compact land mass, with distances measured in hundreds of miles, ASA, Pacific operated on groups of islands or remote mainland positions separated by thousands of miles. Aircraft were the only practical means of transport for personnel and critical supplies, and the demobilization of the Army was affecting the Air Transport Command as seriously as any other branch of the Army. Similarly, communications personnel were redeployed rapidly, making it increasingly difficult to send messages rapidly. As the annual report for the Pacific Theater states: "Mechanical failures were commonplace, delays became the rule."

The Director, ASA, Pacific was given authority over assignment, transfer, and promotion of signal intelligence personnel similar to that given the Director, ASA, Europe (Tabs 49, 50, 51 52).

The security mission of ASA, Pacific is identical with that of the Army Security Agency, WD. Loss of personnel and distances involved in shipping new and repaired equipment made the performance of the security mission extremely difficult, but at no time did any headquarters lack a suitable system.

The intelligence mission of the signal intelligence units in the Pacific had been, at the opening of the fiscal year, the Japanese Army problem. After the Japanese surrender the volume of this traffic dropped sharply, although some coded traffic

was still permitted the Japanese in communicating with their army units. Beginning in December 1945 a survey was made of this coded traffic by ASA, Pacific at the request of the Supreme Commander, Allied Powers, General Douglas MacArthur. In February 1946 all Japanese Army stations were closed by Allied order except those operating between Japan and North China, thus reducing the volume of traffic to be covered. Chinese Government and Chinese Communist traffic was monitored throughout the year, and, during the last half of the year, intercept stations were set up, first in Chungking, China and then in Nanking. Intercepted traffic was forwarded to the Army Security Agency by radio teletype.[22]

After the surrender and occupation Japanese cryptographic and cryptanalytic records were exploited by TICOM teams made up of Army and Navy Signal Intelligence personnel. An additional study was made of Foreign Office cryptanalytic activities in November 1945.

V. HIGH-LEVEL LIAISON AND COORDINATION

A. The Cryptographic Security Policy Board

On 10 May 1944 the President directed the Joint Chiefs of Staff to make a survey of the cryptographic systems and procedures of all Federal agencies using cryptographed communications (Tab 65). The Joint Chiefs of Staff turned the problem

22. See Supplementary Report.

over to the Joint Communications Board, which, recognizing that military and naval communications were adequately safeguarded by the War and Navy Departments, restricted itself to a survey of non-military agencies[23]. An interim report was submitted to the President by the Joint Chiefs of Staff on 1 January 1945 (Tab 66a), stating that piece-meal correction of shortcomings in individual agencies was not enough, and that study was continuing on specific recommendations for "a supervisory agency with authority to achieve the highest possible standards of security of governmental communications"[24].

This study was undertaken by an ad hoc committee made up of members of military and Naval intelligence agencies, including the Chief, Signal Security Agency and the Director of Communications Research, SSA. This ad hoc committee,[25] in its report to the Joint Communications Board, recommended that a Cryptographic Security Policy Board be created by the President to be composed of the Secretaries of State, War, and Navy and drafted an Executive Order for submission to the President (Tab 67).

On 13 July 1945 the President appointed the Security Policy Board, as recommended. This Board, in turn, appointed a Cryptographic Coordinating Committee, the Executive Committee of which,

---

23. Report of Joint Communications Board, 8 Dec 44.

24. Memo JCofS for President, 1 Jan 45.

25. Ad Hoc Committee on Cryptographic Security in Government Agencies.

under the chairmanship of Captain L. W. Parke, USN, representing the State Department, was composed of one representative of the Signal Security Agency, one representative of the Military Intelligence Division, two representatives from the Navy Department, and two representatives from the State Department (including the Chairman).

Two working committees were organized, the Inspection and Indoctrination Committee and the Cryptographic Aids Committee, both of which included members from the Army Security Agency. The first named conducted inspections during the latter part of Fiscal Year 1946 of the following government agencies: Panama Canal; Post Office Department; the U. S. Tariff Commission; the Interior Department; the Civilian Aeronautical Administration; the Weather Bureau; the Office of International Trade, and the Bureau of Standards of the Department of Commerce; the Coast Guard and the Secret Service of the Treasury Department; the War Shipping Administration; the Maritime Commission; the Alien Property Custodian; the Federal Communications Commission; the Department of Labor; the Federal Reserve System; the Federal Trade Commission; the Veteran's Administration; the Federal Loan Agency; the Government Printing Office; and the American Red Cross. Reports of these inspections were forwarded by the Inspection and Indoctrination Committee to the Executive Committee, but no further action was taken.

B. The Cryptographic Research and Development Coordinating Committee

Negotiations between the Chief Signal Officer and the Director of Naval Communications looking to the establishment of a coordinating agency for cryptographic research had been carried on in April 1945 but had achieved no solid results. These negotiations were resumed when, on 11 March 1946, Colonel Hayes, the Acting Chief, Army Security Agency proposed in a letter to the Director of Naval Communications (Tab 68) an Army-Navy Cryptographic Research, Development, and Procurement Coordinating Committee.[26] Citing war experience as proof of the need for coordination in the research and development field, Colonel Hayes pointed out that such a committee would prevent duplication of effort, provide for exchange of pertinent information, and insure maximum utilization of both Army and Navy facilities, and that the arrangement would hamper neither Service in developing projects peculiar to its own needs. The letter further proposed that the Navy appoint an officer to meet with the Chief, Army Security Agency to formulate specific recommendations.

On 8 April 1946 Admiral Earl E. Stone, then Chief of Naval Communications, accepted the ASA proposal (Tab 69) but reserved freedom of action for the Navy. Captain T. A. Smith was appointed Navy representative. At the first meeting, held on 22 April, the

---

26. The name finally adopted for this committee was Army-Navy Crypto-equipment Coordinating Committee (ANCRECC). Further information concerning the history of ANCRECC may be found in volume Six of the History of the Signal Security Agency.

scope of the proposed committee was disoussed. The Navy insisted on retaining the right to withhold such information as it saw fit, while the Army held that a full interchange was desirable.

In a letter dated 20 May 1946 (Tab 70) the position of the Army Security Agency on inter-Service secrecy was set forth by the Chief of the Agency and a tentative Organizational Bulletin was submitted to the Chief of Naval Communications. The proposed committee would have not more than four members from each Service, the ASA members to be the Chief or Deputy Chief, the Director of Communications Research, the Chief, Security Division and the Chief, Research and Development Division. Three subcommittees were to be formed for Ciphony and Cifax (ANPHAX), Cipher Machines (ANCIM), and Procurement (ANCPRO), with such other subcommittees as might prove necessary. Colonel Hayes also indicated in this letter to Admiral Stone that he thought the new committee should be formally established, and he proposed submitting plans for it to higher authority.

The Chief of Naval Communications, on 10 June (Tab 71), concurred with the Army suggestion that the new body be formally and officially established, and appointed the Navy members[27] of the proposed committee and subcommittees. The Navy, however, insisted on the right to withhold information on systems which either

---

27. Navy members of the Committee were: Rear Admiral E. E. Stone, Chief of Naval Communications; Captain L. F. Safford Assistant Chief, Naval Communications for Cryptographic Research; and Captain T. A. Smith, Assistant Chief, Naval Communications for Security.

party wished to use for high level traffic and proposed that this reservation be written into the basic agreement. The Chief, Army Security Agency agreed to this on 20 June, at which time he appointed the Agency members of the committee and subcommittees[28] (Tab 72).

By 1 July 1946 a final agreement (Tab 73) had been worked out by a committee which included all members of the Coordinating Committee except the two Chiefs. This agreement fixed membership by official position in the Army Security Agency and the Office of Naval Communications[29] and provided for a Secretariat made up of one Army and one Navy officer. The Coordinating Committee was to cover interchange of cryptographic information, excluding cryptanalysis except where pertinent. When information was exchanged, security restrictions of the originating Service were to be respected. Information on reserved systems for very high level use was to be given only to the senior officer of the other Service.[30]

---

28. Army members of the Coordinating Committee were: Colonel Harold G. Hayes, Chief, Army Security Agency; Mr. William F. Friedman, Director of Communications Research; Dr. Solomon Kullback, Chief, Research and Development Division; Dr. Abraham Sinkov, Chief, Security Division.

29. Committee membership was vested in the following positions; for the Army Security Agency: Chief, ASA; Director of Communications Research; Chief, R & D Division; and Chief, Security Division; for the Office of Naval Communications: Chief of Naval Communications; Asst. Chief, Naval Communications for Cryptographic Research; Asst. Chief, Naval Communications for Cryptographic Aids; and Asst. Chief, Naval Communications for Communication Security.

30. Information derived from File 334, Army-Navy Cryptographic Research and Development Coordinating Committee.

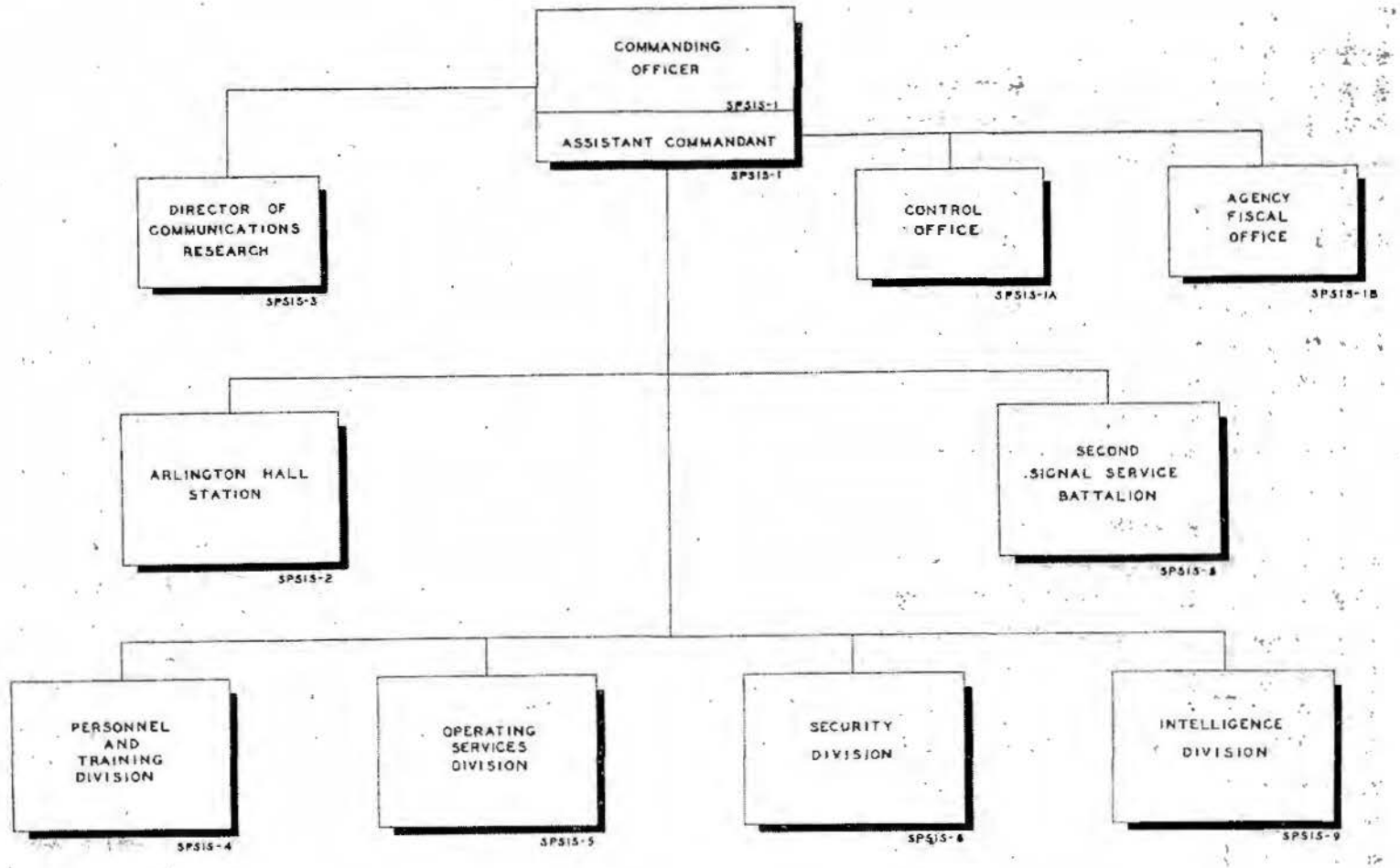
APPENDIX

ID: 6579558

~~SECRET~~

SIGNAL SECURITY AGENCY

~~SECRET~~



*THE COMMANDING OFFICER OF THE SIGNAL SECURITY AGENCY IS ALSO COMMANDING OFFICER OF ARLINGTON HALL STATION AND COMMANDING OFFICER OF THE SECOND SIGNAL SERVICE BATTALION. THIS COMPOSITE ORGANIZATION CHART RESULTS FROM A SUPERIMPOSITION OF THE BASIC ORGANIZATION CHARTS OF THE SIGNAL SECURITY AGENCY, ARLINGTON HALL STATION AND SECOND SIGNAL SERVICE BATTALION.

COMPOSITE ORGANIZATION

~~SECRET~~

[redacted]

[redacted]

FUNDS OBLIGATED IN FY 1946 BY BRANCH

Branch	Amount
Machine	$ 526,009.77
Research & Development Division	462,077.80
Supply	80,219.32
Intercept Control	48,682.63
Maintenance	45,947.38
Materiel	29,371.93
Cryptanalytic	11,724.55
Laboratory	9,059.62
Information & Documents	6,108.37
CO, Arlington Hall Station	1,523.04
Plans & Operation Section (Staff)	472.25
Personnel & Training	467.71
Protective	78.56

[redacted]

[redacted]

[redacted]

FUNDS OBLIGATED IN FY 1946 BY PROJECT

Project	Description	Amount
120	Equipment & Supplies for Combat Organizations	$ 47,578.44
221	Construction of Administrative Radio Systems	40,047.70
310	Equipment, Supplies, and Other Expenses for the Operation of Signal Corps Activities	705,598.13
310-01	Payment of Personnel for Army Security Agency	7,833,268.13
421	Maintenance and Operation of Administrative Radio Systems	7,832.29
460	Photographic Service	7,512.28
510	Equipment, Supplies, and Other Expenses for Training	5,979.86
610	Research and Development	459,307.46
	Total	$ 9,107,124.31

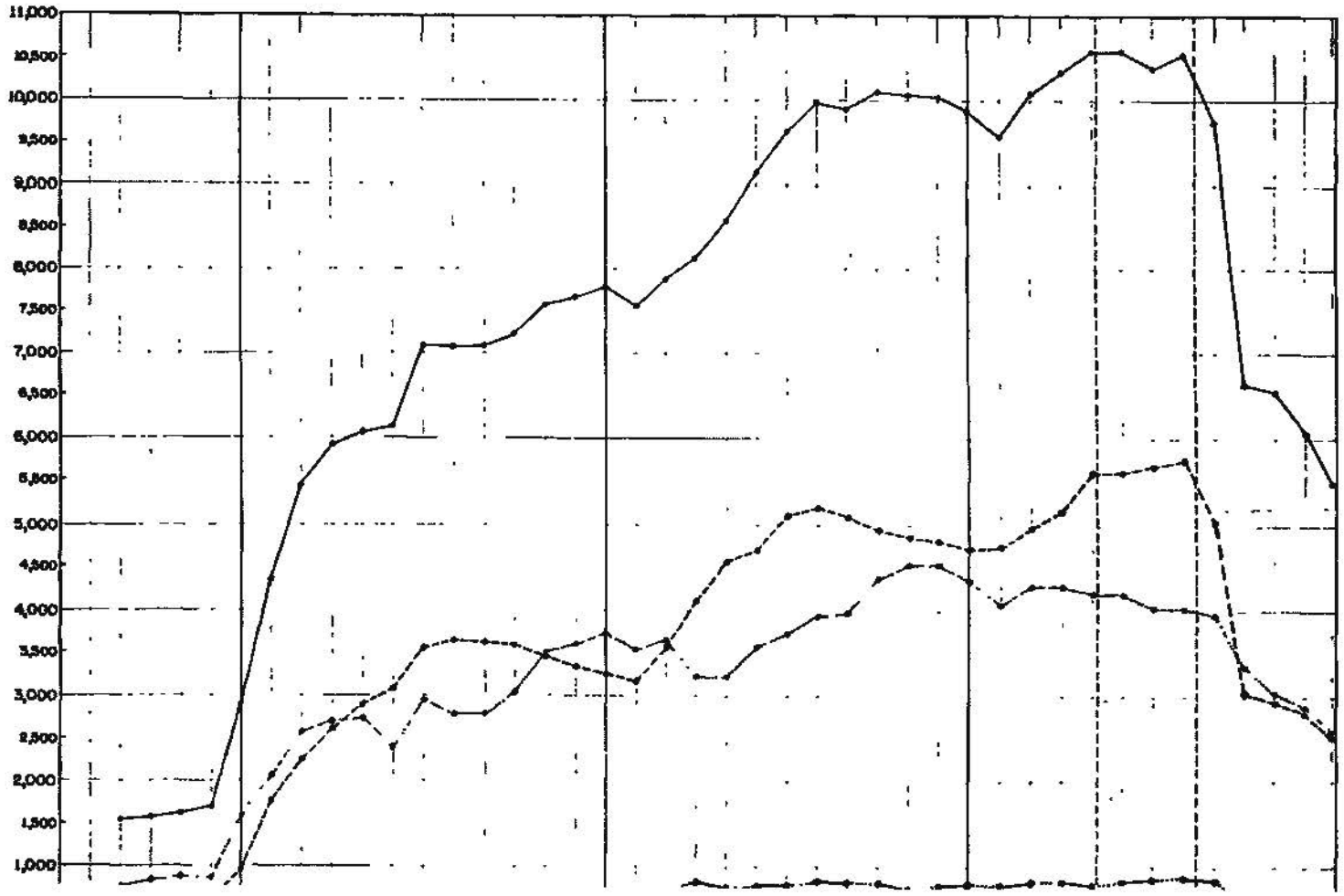
[redacted]

Doc ID: 6579558

[redacted]

Total Strength, Signal Security Agency, Compiled from Daily Strength Reports

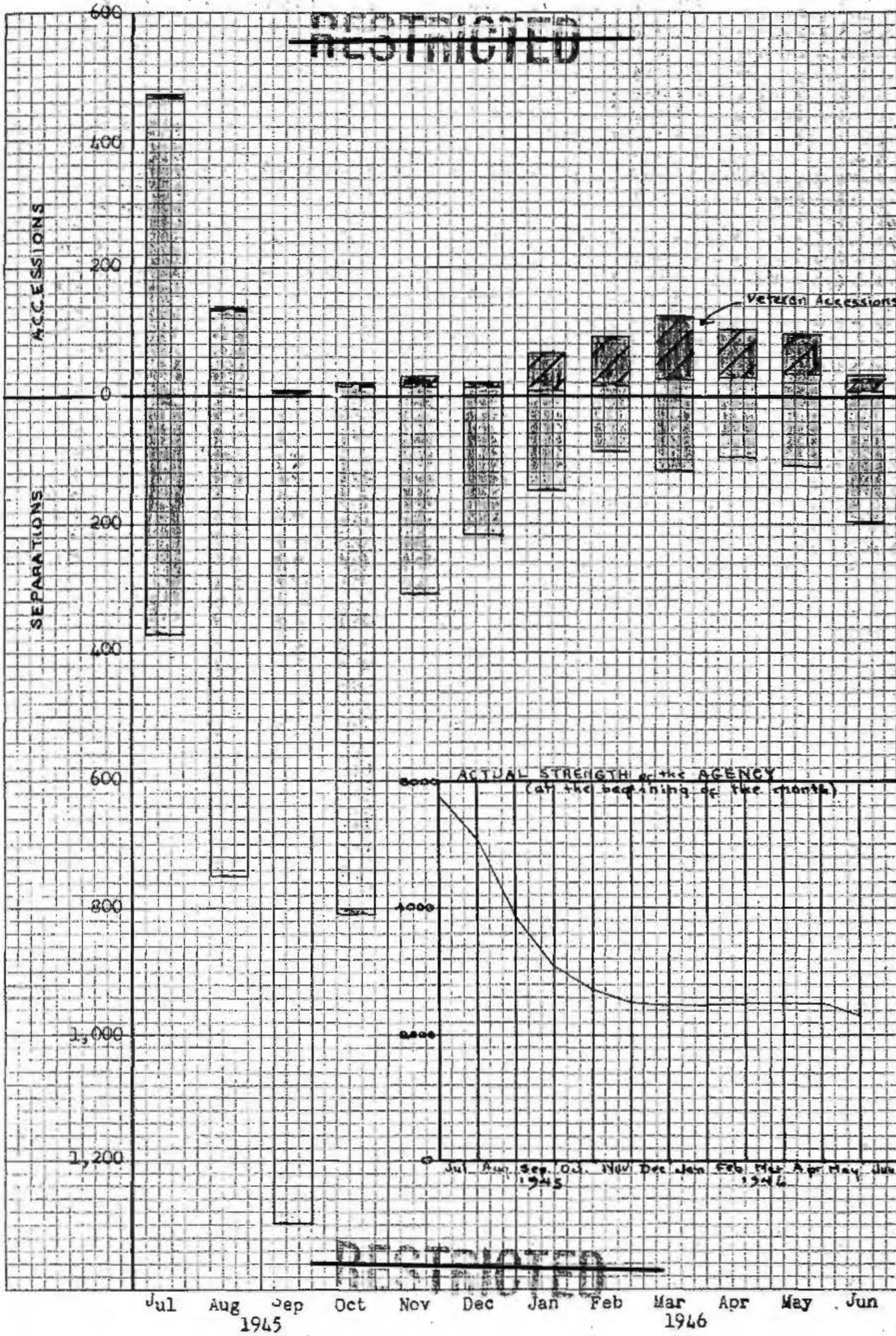
(AS OF THE FIRST DAY OF THE MONTH)



Doc ID: 6579558

ACCESSIONS, SEPARATIONS, AND STRENGTH OF THE AGENCY

~~RESTRICTED~~



~~RESTRICTED~~

SPSIS-3 7 July 1945

SUBJECT: Outline Program for Research and Development

TO: Commanding General
Signal Security Agency

I. INTRODUCTORY.

1. a. The program outlined herein takes as its point of departure the recently-announced War Department Policy on Research and Development (Tab A), which may be summarized by quoting the following statement therein: "Research and development must be directed toward maintaining superiority of our weapons and equipment over those of the enemy and should guarantee the availability of proven types, superior in all respects to those of other nations."

b. In the succeeding paragraphs the various sectors of research and development in the cryptologic field will be indicated in very general terms, grouped under two main areas: (1) signal security and (2) signal intelligence. The urgent need for research and development in both areas is discussed in some detail in Tab B; at this point it is only essential to indicate that the advances in cryptology made in the past few years already have had and are going to continue to have far-reaching consequences in signal communication technology. We must anticipate and prepare to meet these consequences.

2. It will be assumed, lacking further information, that research and development in the Army and the Navy will follow independent but well-coordinated lines. Until the concept of a unified Department of National Defense passes from the discussion to the reality phase, it is clear that the Army, to conform with the announced policy (which incidentally does not even mention the Navy), must insure, on its own efforts and without reference to what the Navy is doing or will do, that its assigned mission is successfully accomplished.

3. In Tab C are listed the various categories of cryptologic instrumentalities, techniques, or fields to which research and development should be undertaken on a continuous

basis. In the succeeding paragraphs only the high lights of an overall program of research and development within these categories can, of course, be indicated. They will be set forth in logical order.

II. RESEARCH AND DEVELOPMENT IN INTERCEPTION AND RELATED FIELDS.

4. Interception, identification, etc.-- The scope of the work to be undertaken in this field would include all problems involving interception, identification, recording, and high-speed forwarding of intercepted friendly and enemy radio and wire communications or other signals used in the conduct of war. A laboratory for this purpose should provide all the specific facilities necessary for conducting research, developing, constructing, and testing prototypes of all types of apparatus or equipment required to carry out these broad directives. The laboratory should also provide for training specially selected military personnel in the most modern intercept practices, not merely good receiving practices, because the two are not identical. Space does not permit of pointing out the differences. More detailed information regarding the proposed laboratory are given in Tab D.

III. RESEARCH AND DEVELOPMENT IN THE SIGNAL SECURITY FIELD.

5. Crypto-mechanisms, including cryptographic, ciphony, cifax, authentication or identification devices.--a. A completely integrated program of work in research and development of crypto-mechanisms prepared a number of months ago by the Signal Security Agency, has been approved by the War Department. The Cryptographic Plan is far-sighted and appears adequate at the moment. However, it must be reviewed carefully and periodically to insure that modifications required by continuous progress in technology will be promptly embodied in the plan, in order to make it a constantly up-to-date guide for our research and development engineers. In order to conduct research and development in this sector, we have the present laboratories and facilities of the Equipment Branch; also, provision has been made for certain phases of this research and development to be pursued under contracts with outside laboratories, such as the Teletype Corporation, the Bell Telephone Laboratories, etc. Estimates of funds for this work, including provision for a new building, have already been submitted. (Tab E)

b. Methods and procedures.-- Constant research, in order to uncover weaknesses in our own crypto-mechanisms and systems and to introduce improvements in methods and procedures associated with them, including transmission security,

will be required. The Communication Security Branch now has a small laboratory, but a larger one soon may be required in order to be in a position to try various methods and procedures for the use of new crypto-mechanisms (ciphony, cifax) or the improvement of existing ones. It should in addition be provided with adequate testing equipment to investigate the security of transmission means.

6. Secret inks and other forms of disguised written communications.-- a. Possibly the best avenues for exploration in this field can be found in:

(1) New chemicals or formulae for the preparation of secret inks undetectable by any of the presently known reagents or processes.

(2) Simpler and better apparatus for the preparation and use of micro-writing.

(3) New methods and means of invisible writing, other than those of a chemical or microscopic nature.

(4) Methods and means for the production of printed documents which can be quickly destroyed.

b. The present facilities and space allotted to the Laboratory Branch should be adequate for post-war research, since the large amount of simple photo-reproduction now done would be very greatly reduced.

7. Radio countermeasures.-- The Protective Security Branch should conduct research and development work in the fields of traffic analysis and radio communication cover and deception, as follows:

a. Research and development of the techniques, procedures and statistical studies used by U. S. forces in traffic analysis and radio communication cover and deception.

b. Research and development of communication deception equipment, devices and facilities. This is now done under the auspices of the New Developments Division, War Department Special Staff, by contractual arrangements with commercial laboratories and manufacturers, but this situation will probably not continue in the post-war period, and we should anticipate taking it over.

IV. RESEARCH AND DEVELOPMENT IN THE SIGNAL INTELLIGENCE FIELD.

8. Cryptanalysis.-- a. Growth in cryptanalysis will be in several directions. Modern cryptography demands machine

methods of rapidly testing all the implications of a great multiplicity of assumptions, through exhausting the various possibilities, evaluating the probabilities inherent therein, and recording the results. Other machinery applies recovered data and keys to intercepted texts; such machines, analogous to enemy machinery or hand methods in their products, but far more rapid and accurate in operation, effect untold savings in time and personnel. During the War, standard or modified tabulating equipment (e.g., IBM) and machines designed for particular problems of this general nature, but using standard electrical devices (e.g., telephone switching equipments) have been eminently successful.

b. Research in the ~~IBM~~ art as applied to cryptology should be concerned with the continuous refinement of existing techniques, machines and devices and the development of new techniques, machines and devices embodying latest electromechanical principles. Faster and more economical means of solution and processing of messages are highly desirable. ~~Constant improvement in tape-to-card and card-to-tape techniques and apparatus should be studied.~~

c. Machinery designed for both general and specific cryptanalytic attack, using specially developed equipment, will mean speedy success in producing intelligence in cases where standard equipment is inapplicable. Thus the potentialities of photoelectric, electronic, and electromechanical machinery must be investigated and the theory behind such machines expanded if cryptanalytics is to go forward. In exploring the newer fields in high-speed analytical machines, it may be necessary to investigate several, apparently parallel means of accomplishing certain results. For this reason, research and development to uncover the very fastest and most practical machinery should not confine itself to a single line of attack such as IBM or RAM; all avenues likely to produce interesting or important results should be explored.[1]

---

[1] In this connection, the following extract from a recent statement by Dr. Vannevar Bush, Director of the Office of Scientific Research and Development, a man who should know whereof he speaks is worth noting:

"The scientist must be free from restrictive controls. He must not be under the compulsion to produce immediate results in order to obtain advancement. Moreover, there must be parallel research attacks on a given problem by several groups approaching from different points of view. This has been demonstrated times without number in industry and in our own war experience. In developing a land-mine detector, for example, we found it necessary to have four different groups tackle the problem simultaneously from different angles."

d. A word must be said about what the future holds forth in the cryptanalysis of such newer forms of secret communication as ciphony and cifax. Both of these are bound to grow in importance -- and very rapidly. Problems of great difficulty lie ahead for the cryptanalyst and more and more high-grade electrical engineering ability will be required.

9. Mathematics and statistics.-- In addition, to widen the frontiers of mathematical and statistical methods of cryptanalysis, especially those involving the reliability of predictions, to discover, evaluate, and perfect new techniques of solution, and to bring greater refinements in classical methods of solution and existing techniques, we should employ first-class men in these fields. The contributions which the mathematicians and statisticians have already made in the solution of the "E" and the "Fish" problems point the way to very important developments.

10. Traffic analysis.-- Research in the techniques and procedures used by other nations, both friendly and enemy, in traffic analysis and radio communications cover and deception is quite desirable. Traffic Analysis and radio deception and countermeasures constitute a sector of the cryptologic field that is really only a few years old. It is probable that when knowledge of what has been accomplished by the victors in this war in these fields becomes more generally known, the work of the traffic analyst of the future is going to be much harder. Research which will enable us to penetrate through the possible deceptive disguises which may be placed about his communications by an alert or astute enemy is very important.

11. Facilities and personnel.-- As concerns laboratory facilities for research and development of cryptanalytic apparatus, the remarks contained in paragraph 5 a are also applicable here. It is deemed advisable, because of the close inter-relationship between research and development of crypto-mechanisms and research and development of cryptanalytic mechanisms, to have a single large laboratory for both sectors, rather than a separate one for each sector.

V. GENERAL REMARKS.

12. The future.-- a. Signal security and signal intelligence are growing up. From the relatively simple ways and means of only a very few years ago there have grown more and

more complex things -- and we are just on the horizon of great discoveries and revolutionary changes in the cryptologic field. We must "set our sights" high enough to be really successful in accomplishing the mission assigned. Greatly expanded facilities are essential. More and better personnel are also essential. Because of its increased importance in the post-war picture and because a great diminution in military cryptanalysis may be expected, thought should be given to the question whether all our research and development should be organized within a closely integrated Research and Development Division, on a level with the other divisions.

b. Mention has already been made of a new building for housing the laboratories and the question arises as to where it should be located. In the case of cryptanalytic equipment, there are, of course, advantages in being near the center where the cryptanalytic work is done; but there are also disadvantages. "Proximity of the research laboratory to the production center is an ever-present temptation to the production management to draw the laboratory into undertaking or studying the daily bread-and-butter problems which the production unit should be capable of solving for itself." There is good sense in that and this point should be given consideration when the time comes to select the site. The latter should have sufficient land in the vicinity for outside testing or for making certain kinds of engineering or field tests of new equipment.

c. The new buildings should contain sufficient space to house a good technical library and a museum. These have important educational values for the engineering staff.

d. Cryptologic engineers of the future will have to be familiar with the latest results of many other sciences and they will have to be obtained and paid on a high professional level. They must not only all be technically qualified to do the difficult day-to-day work expected, but also a few of them must be of such high caliber as to insure that original contributions will result from first-class, well-organized, but highly imaginative thinking. They must keep abreast of progress in the university and scientific laboratories which engage in studies that impinge upon their own field, so as to be in a position to bring promptly to cryptologic engineering the benefits of the many advances that will surely be made in related fields.

WILLIAM F. FRIEDMAN
Director of
Communications Research

5 Incls
Tabs A thru E

WDCSA 400.112 (30 Mar 45) ~~SECRET~~ 1 May 1945

MEMORANDUM FOR THE COMMANDING GENERAL, ARMY AIR FORCES
COMMANDING GENERAL, ARMY GROUND FORCES
COMMANDING GENERAL, ARMY SERVICE FORCES

SUBJECT: War Department Policy on Research and Development.

1. The need for continuous and aggressive action in research and development activities for the purpose of making the most effective equipment available to our troops is essential in maintaining a superior military position. It is most important not only to maintain a superior position in materiel now, but also to assure that all possible impetus will be given to research and development of military equipment in the future. Programs must be scanned continuously to insure that essential activities are carried forward and unprofitable projects are eliminated.

2. It is desired that the programs of responsible agencies be governed by the following principles:

a. Research and development must be directed toward maintaining superiority of our weapons and equipment over those of the enemy and should guarantee the availability of proven types, superior in all respects to those of other nations. This requires that research and development be afforded a high priority as a continuing commitment. Only operational needs should supersede this priority.

b. Close liaison must be maintained between the eventual using organization and the developing agency. Of particular importance are the ideas and recommendations of the user when the development has passed the research stage and the actual construction of the pilot model is begun. The using organization should always participate in the mockup stage of the development. Procedures will be established to keep the using arms and commands aware of the program on new equipment throughout its design and development and to allow them to present in these phases their comments and desires prior to crystallization of the pilot model.

c. Development programs will be based on anticipation of future operational requirements. To accomplish this, guidance should be sought from and be provided by the Assistant Chief of Staff, Operations Division, in accordance with the provisions of War Department Circular 134, 8 April 1944.

d. Responsible agencies will initiate action to place their research and development activities on a permanent post-war basis. Attention should be given to providing for permanent well-qualified scientific and technical staffs, civilian as well as military.

e. Continued emphasis will be placed on research and development of such devices as guided missiles, rockets, heavy armored equipment, large caliber bombs, new applications of electronic equipment and jet propelled aircraft; including equipment required for amphibious operations and for airborne and joint air-ground operations. Continued thought should be devoted to research with the intent of developing equipment and methods for carrying on types of warfare heretofore unknown and unexplored.

f. Engineering testing and service testing of new items of equipment will be combined whenever practicable.

s/

THOS. T. HANDY
General, GSC
Deputy Chief of Staff

Procedure for Submission of Technical Service Plans for Post-War Laboratories and Testing Installations.

1. In order that the reports of the several Technical Services will be in conformity, the following assumptions apply:

a. No independent agency with separate funds will be available to the Technical Services in the post-war era for assistance in the research and development program of the Technical Services.

b. The requirements for establishments, personnel, and funds will be based on the continuance of those research and development programs now classified as Group III, namely, "Those projects which are of sufficiently great importance to be classified as urgent, long range, continuing, peacetime developments."

2. The reports of the several Technical Services will include statements paragraphed as follows:

a. The general research and development policy of the Technical Service.

b. Laboratories and testing installations to be maintained by each Technical Service with a general description of the equipment and facilities of each installation.

(1) The requirements for establishments, personnel, and funds will include those officers engaged in research and development in the Technical Services on duty in the Washington area and this portion of the Services' post-war research and development plan will be reported separately.

c. Scope of research and development work to be undertaken at each installation.

d. Military personnel (broken down into officers and enlisted categories) to be utilized at each of the above listed installations.

e. Civilian personnel to be utilized at each of the above-listed installations.

f. Estimated costs of establishments not now available to the Technical Service which are considered necessary in post-war research and development.

g. Estimated operating costs of each of the above installations per year.

h. Scope of research and development work [illegible] jurisdiction of each of the Technical Services to be assigned by contract to non-military research agencies.

i. Non-military research establishments to be used by each Technical Service.

j. Estimated funds required for contracts with non-military research agencies.

TOP SECRET

The Necessity for Co[illegible]us [illegible]evelopment in the Cryptologic Field

1. Progress in the realm of signal security devices, methods, and procedures and progress in the realm of signal intelligence devices, methods, and procedures present the same general type of action -- reaction phenomena in the cryptologic field that progress in the two realms of projectiles and armor-plate present in the ordnance field. In order to carry out the mission indicated in paragraph 1 of the basic paper, we must therefore engage in research and development in both the signal security and the signal intelligence fields.

2. Let us take a bird's-eye view of the problems presented by the advances made in recent years in the cryptologic field. On one side, in the realm of signal security, we find that new fields and means of secret communications have been discovered, such as ciphony and cifax, and that improvements in old cryptographic machinery (exemplified in the increasing complexity in rotor mechanisms) and the invention of new crypto-mechanisms (such as cryptoteletype) have been introduced. On the other side, in the realm of signal intelligence, we find that new analytical tools have been discovered and important improvements have been made in old analytical tools. These advances in both fields are bound to exercise a profound effect upon not only signal security devices, procedures and methods, but also upon cryptanalytic methods and machinery. The discovery of new fields and the introduction of great improvements in old fields in the realm of crypto-mechanisms require not only that we explore these new fields thoroughly and apply these improvements as soon as possible, to the end that the security of our own communications may be maintained at the highest level, but also that we learn how to solve these new and improved systems, because other governments may and probably will use them too. As a matter of fact, the development and practical application of new cryptanalytic techniques and machinery have already caused very serious repercussions in the fundamental philosophy upon which crypto-mechanisms have hitherto been based. This point deserves some elaboration, and is briefly discussed in the next paragraph.

3. Hitherto cryptographers have deemed it technically valid to place great reliance upon effective delays in cryptanalysis introduced by the need for testing and evaluating very large numbers of hypotheses resulting from the actual or potential use of astronomically large numbers of possible permutations or combinations of keying elements. Briefly,

TOP SECRET

cryptographers were satisfied as to the security afforded by a given system when the number of trials or tests of assumptions that had to be made was so large that a solution could be considered entirely impractical. This basic concept has largely been made invalid by the cryptanalytic achievements of the past half-dozen years, with the aid of special machinery, brilliant in conception and highly potent in application. As a consequence, not only is there pressing necessity for greatly improving existing crypto-mechanisms and for inventing new ones to protect our high-echelon communications, but also we are being forced to employ crypto-mechanisms of greater and greater security to protect our low-echelon communications. It is obvious therefore that we will fall behind in security unless we establish a far-reaching, adequate program of research and development in the realm of signal security devices and technology.

4. It is obvious that we cannot hope to keep the cryptologic achievements of the United States and Great Britain completely secret for an indefinite or large number of years. Also, the use of high-security devices for protecting low-echelon communications is being forced upon us because of the increasing competency of enemy cryptanalytic services. This will entail for us an element of considerable risk, since capture of such devices can be expected, followed by their copying and use by the enemy. Thus, when our achievements in the construction of high-grade security mechanisms and in the invention of high-speed analytical mechanisms become more generally suspected or known, and when certain of our devices are captured, other governments are inevitably going to introduce radical improvements in their signal security devices and methods. This <u>may</u> result in producing serious consequences for us, in that there is great danger of drying up present sources of our intelligence, if or when enemy communications can no longer be read, because the enemy has become better educated in cryptology. This result <u>will</u> occur unless we establish a far-reaching, adequate program of research and development in the realm of signal intelligence devices and technology, in order to keep ahead of any potential enemy.

5. Events of the past few years have also demonstrated that war in the future, if it comes, will come with devastating suddenness -- unless the signal intelligence service is sufficiently competent to give adequate warning of impending disaster, for only by signal intelligence successfully conducted in peacetime will we be in a position to know of the secret thoughts, actions, and machinations of a predatory and ruthless enemy. Such a signal intelligence service will have to be provided with the very best, high-speed analytical and processing machinery that can be devised by us, otherwise the service is bound to fail in its mission.

FIELDS OF RESEARCH AND DEVELOPMENT OF INTEREST TO [illegible]

1. Intercept, including direction finding, position finding, radio fingerprinting, and Tinc (apparatus and methods).

2. Techniques and apparatus used in forwarding intercept traffic to cryptanalytic centers, including improvements in tape-to-card and card-to-tape transfer of data.

3. Crypto-mechanisms, including cryptographic, ciphony, cifax, authentication and identification devices.

a. Improvements in existing systems and apparatus for our own use.

b. New systems and apparatus for our own use.

4. Security.

a. Improvements in methods and procedures associated with our own crypto-communications.

b. Improvements in our own transmission security.

c. Weaknesses in our own cryptographic systems and apparatus and their exploitation by cryptanalysis.

5. Secret inks, micro-writing, recovery of readability of completely or partially obliterated documents which have been subjected to destruction measures.

6. Radio Countermeasures and machines.

7. Traffic analysis, including development of new techniques in uncovering deceptive measures.

8. Cryptanalysis.

a. Collection, analysis, and evaluation of foreign crypto-communications.

b. Improvements in methods and procedures employed in the exploitation of solved foreign crypto-communications.

c. Invention of new and improvement of existing rapid analytic machinery.

d. Improvement of existing machines for facilitating decryptographing of messages in solved systems and development of new machines for this purpose on old and on new systems.

e. New applications of existing cryptanalytic and rapid analytic machinery, including IBM, to cryptanalysis or exploitation.

g. Radio emanations related to the control of guided missiles and other ordnance.

TOP SECRET

SCOPE OF WORK TO BE UNDERTAKEN BY RADIO INTERCEPT AND COMMUNICATIONS RESEARCH LABORATORY

1. Intelligence Systems.-- The laboratory would be charged with the investigation of all known and suspected electrical systems for conveying intelligence, with special emphasis on means and methods for interception, identification and recording signals emanated in systems such as automatic non-Morse printers, page and tape facsimile systems, ciphony, cifax, etc.

2. Communication Systems.-- It will be the responsibility of the laboratory to investigate all known or proposed type of radio communication systems presenting the possibility of incorporating security features, such as FM, phase modulation, pulse modulation, carrier shift, multi-channel, single sideband and flash transmissions with emphasis on problems involved in intercept of these systems of communication if used by an enemy.

3. Receiving Systems.-- The laboratory would carry on investigations, pointed toward the highly specialized requirements of intercept work, of all types of receiving systems and equipment, including all kinds of antennas, radio frequency coupling and transducing devices, multicouplers, etc.

4. Raw-material forwarding systems.-- The laboratory would investigate the present method and equipment employed in the expeditious (electrical) forwarding of the intercepted traffic from the intercept centers to the cryptanalytic centers with a view to increasing speed and possible simplification of procedures.

5. Location and Size of Laboratory.-- In order to meet the requirements of the Signal Security Agency, it is believed that the Radio Intercept and Communication Research Laboratory should be established at Vint Hill Farms Station, Warrenton, Virginia, thus placing it sufficiently near the Headquarters, Signal Security Agency for satisfactory control and liaison and at the same time placing at the disposal of the laboratory the antenna and other intercept facilities of MS-1 as well as space for the testing of new antenna designs. There are no suitable buildings now available for a laboratory of the size contemplated for post-war operation. However, space has been included in an estimate of post-war requirements for buildings at Vint Hill. There are available suitable buildings near the operations area at Vint Hill which it is believed can be made available for an initial establishment. Future construction should provide approximately 40,000 square feet of floor space for this facility.

TOP SECRET

6. Personnel.-- The number of personnel required to staff the laboratory would be approximately twenty-five, including supervisors, technicians, and laboratory assistants, mechanics, and clerical personnel. In the closing phases of the war, this personnel would, it is believed, be principally military with approximately equal numbers of officers and enlisted personnel, but the post-war organization would probably comprise mostly civilian personnel.

7. Administration.-- The laboratory would be under the command of the Post Commander, Vint Hill Farms Station, for administration. However, functional control should be vested in Signal Security Agency and direct channels between this headquarters and the officer in charge of the laboratory should be maintained for the conduct of informal coordination.

8. Funds required.--a. The initial cost, including building (or portion of other building occupied) and all necessary equipment, is estimated to be $250,000.

b. The operating cost of this establishment on a post-war basis, including civilian salaries, and material, would be approximately $150,000 a year. It is not contemplated that any major part of the work of the laboratory would be accomplished by outside contract.

D: 6579558

~~SECRET~~

SPSIS-1

1 June 1945

SUBJECT: Plans for Post-War Laboratories and Testing Installations

TO: Chief, Communications Engineering Branch
Room 4D 273, The Pentagon
Washington 25, D. C.

1. With reference to Comment 2 and inclosures thereto, the following information is submitted:

a. Reference paragraph 2a - Policy is to conduct research and development work in order to assure:

(1) The superiority of signal security equipment used by the United States Army over cryptanalytic efforts of any possible enemy.

(2) The superiority of the cryptanalytic equipment of the United States Army over any enemy signal security means.

b. Reference paragraph 2b - The Cryptologic Research and Development Laboratories of the Signal Security Agency:

(1) Equipment and facilities:

(a) All equipment commonly found in an up-to-date electronic laboratory.

(b) Machines, metal plating and finishing equipment, and tools for the construction of models of electrical, electro-mechanical and mechanical communication equipment.

(c) Equipment for the experimental construction of vacuum tubes.

(d) Vehicles necessary for engineering tests of models.

(e) Communication equipment which will be associated with equipment developed.

(f) Service facilities, such as drafting and supply.

COPY

~~SECRET~~

SECRET

(2) Reference paragraph 2c(1) - All equipment and facilities are in the Washington area. Cost of present plant equipment is estimated $250,000.00

c. Reference paragraph 2c - Research and development on all signal security and cryptanalytic equipment.

d. Reference paragraph 2d - Military personnel - 104
Officer 79
Enlisted 34

e. Reference paragraph 2e - Civilian personnel - 111

f. Reference paragraph 2f - None, other than permanent buildings to replace present temporary buildings. No estimate of cost can be made until availability of present buildings has been determined. However, the estimated cost of a permanent building is $500,000.00.

g. Reference paragraph 2g - In addition to amount stated in paragraph f above:

Equipment and supplies	$ 225,000.00
Payroll 215 @ $2500	537,500.00
Overhead	270,000.00*
Total	$1,032,500.00 per annum

*Share of prorated estimate, administrative overhead.

h. Reference paragraph 2h - Construction of models for service tests.

i. Reference paragraph 2i - Teletype Corporation, Western Electric, RCA, and other communication development agencies.

j. Reference paragraph 2j - $1,150,000.00 per annum.

2. The above figures cover only laboratory personnel and do not include personnel engaged in requirements planning of signal security activities, evaluation of security and formulation of security principles or cryptanalytic studies.

1 Incl
Comment 2 w/2 incls.

W. PRESTON CORDERMAN
Colonel, Signal Corps
Chief, Signal Security Branch

SECRET

COPY

~~SECRET~~

Army Service Forces
Signal Security Agency
Washington 25, D. C.

(extract)

4 August 1945

OFFICE ORDERS

NUMBER 49

1. Effective this date, a Post-War Planning Board for Signal Security Agency is established with the following officers and civilian personnel designated as members:

MAJOR LAWRENCE D. PREHN, 0343457, Signal Corps
MAJOR ROBERT S. HOFF, 0409796, Signal Corps
CAPTAIN WILLARD M. BAIRD, 01635200, Signal Corps, Chairman
CAPTAIN HARRY O. SCHLOSS, JR., 0918331, Signal Corps
CAPTAIN OSCAR WILDER, JR., 0450947, Signal Corps
CAPTAIN WILLIAM F. DREES, 01635806, Signal Corps
CAPTAIN RUSSELL A. HARDER, 01633257, Signal Corps
CAPTAIN FRANCIS E. MALONEY, JR., 01636261, Signal Corps
CAPTAIN HAMMILL D. JONES, 0454492, Signal Corps
CAPTAIN STEPHEN HARTWELL, 01633263, Signal Corps
Mr. MARK RHOADS

This Board will be responsible for preparing, developing, and coordinating plans for the operations of Signal Security Agency after VJ-Day and for complying with planning programs required by higher headquarters.

The Board will meet at the call of the Chairman.

***

BY COMMAND OF BRIGADIER GENERAL CORDERMAN:

J.E.KENNEY
Captain, Signal Corps
Adjutant

OFFICIAL:

/s/ J. E. Kenney
J. E. KENNEY
Captain, Signal Corps
Adjutant

DISTRIBUTION:
Ea O concerned.....1
Chief, ea Br concerned...1
Adjutant, SSA.....1
Ea O 201 file.....1

22 August 1945

Commander-in-Chief, Army Forces, Pacific, Command, Manila, Philippines

Commanding General, U. S. Forces China Theater, Chungking, China

Commanding General, U. S. Forces India-Burma Theater, New Delhi, India

Commanding General, U. S. Forces European Theater, Main, Frankfurt, Germany

Number WARX 53599

Signed WARCOS

All Signal Intelligence units and personnel within your theater (as well as those in other theaters and in departments and defense commands, and including Signal Security Agency with its intelligence and security activities and 2nd Signal Service Battalion) are placed under the direct command of the War Department.

Specific orders for transfer of such units and personnel will be issued progressively and as expeditiously as practicable by Chief, Military Intelligence Service. Theater Commanders, Defense Commands and Departments will continue to exercise administrative and disciplinary control over units and personnel within their areas placed under the command of the War Department.

The Chief, Military Intelligence Service will assign Signal Intelligence units and personnel to theater, defense or department commanders as needed to meet local tactical or security requirements, and may, with the appropriate commanders concurrence, reassign such units in accordance with the situation.

Personnel will not be transferred to or from any signal intelligence organization or unit without the prior concurrence of the Chief, Military Intelligence Service, except in accordance with established procedures for the demobilization of military personnel.

End

CM-OUT-53599 (Aug 45)

28 August 1945

Commanding General
U.S. Forces European Theater Main, Frankfurt, Germany

Commanding General
USAF Mediterranean Theater of Operations, Caserta, Italy

Commanding General
U. S. Forces in India Burma Theater, New Delhi, India

Commanding General
U. S. Forces in China Theater, Chungking, China

Commanding General
Western Defense Command, San Francisco, California

Commanding General, Alaskan Department
Advance Command Post, Adak, Alaska

Commanding General, Alaskan Department
Rear Echelon Fort Richardson, Alaska

Number WARX 56718

From Chief Military Intelligence Service signed WARCOS

Pursuant to message WARX 53599 dated 22 August 1945 the Army Security Agency under direct command of the War Department has been established and designated as organization into which all Signal Intelligence units and personnel will be incorporated. Brigadier General W. Preston Corderman has been designated Commander of ASA. In order to expedite transfer Signal Intelligence units and personnel your theater to Army Security Agency desire radio report be made earliest practicable date concerning:

A. All Signal Intelligence Table of Organization units your theater by unit designation and authorized strength together with any augmentations and authority therefor

B. All Signal Intelligence personnel under bulk allotment your theater in provisional units if any by unit designation and strength broken down by officers, warrant officers, enlisted men and aggregate

C. Other bulk allotment Signal Intelligence personnel operating under Manning Tables broken down by officers, warrant officers, enlisted men and aggregate.

End

CM-OUT-56718 (Aug 45)

SECRET

COPY

~~SECRET~~

WAR DEPARTMENT
The Adjutant General's Office
Washington 25, D. C.

AG 322 (4 Sep 45)OB-S-B-M CJT/aj 2B-939 Pentagon

6 September 1945

VIA AIRMAIL

SUBJECT: Establishment of the Army Security Agency

SECRET
Auth: T. A. G.
Initials
DATE: 6 SEP 45

TO: Commanding Generals
Army Air Forces
Army Ground Forces
Army Service Forces
Commander-in-Chief, U. S. Army Forces, Pacific
Commanding Generals, Theaters of Operations
Defense Commands
Alaskan Department
Military District of Washington
Independent Commands under War Department

1. The Army Security Agency is established with headquarters in Washington, D. C., effective 15 September 1945. It will operate under the direct command of the War Department.

2. The Army Security Agency will comprise all signal intelligence and communications security establishments, units and personnel of the Army. Such establishments, units and personnel now assigned or attached to major forces, commands and departments or subordinate elements thereof will be transferred to the Army Security Agency upon receipt of orders from the War Department. No change is contemplated for the present in the location of units or personnel affected by this letter. These instructions apply to such units and personnel as Signal Security Agency, Second Signal Service Battalion, personnel engaged in signal intelligence activities organized under bulk allotment of Theaters, Departments, or Commands; Signal Radio Intelligence Companies, T/O & E 11-77, dated 1 April 1942; Signal Service Companies (Radio Intelligence) T/O & E 11-500, dated 15 September 1944; Signal Intelligence Service Detachment, Types A, B, C, D, E, under T/O & E's 11-657S, 11-667S, 11-677S, 11-687S, 11-697S respectively, dated 18 December 1943; personnel of Radio Intelligence Platoons of Headquarters and Headquarters Company, Signal Battalion, T/O and E 11-16, dated 10 December 1943; Army Air Forces Radio Squadrons Mobile, T/O & E 1-1027, dated 19 January 1945; personnel of Radio Intelligence Platoons of Signal Companies Aviation T/O & E 11-217, dated 19 May 1942, and all other units and activities organized to perform signal intelligence functions. Specific orders for the transfer of the above units and personnel will be issued progressively and as expeditiously as practicable.

~~SECRET~~

~~SECRET~~

~~SECRET~~

AG 322 (6 Sep 45)OB-S-B-M Cont'd 6 September 1945

3. Personnel will not be transferred to or from any Army Security Organization or Unit without prior concurrence of the Chief, Army Security Agency, except in accordance with established procedures for demobilization of military personnel.

4. Signal Intelligence and Communications Security Units and personnel of the Army Security Agency will be allocated to major forces and commands as needed to meet local tactical or security requirements of such forces and commands. Headquarters, Army Security Agency, Washington, D. C. will be notified of the disposition made by the major forces or command of such units or personnel and advised of all subsequent changes or reassignment. When so allocated such units and personnel will be administered by the major force or command but will operate in accordance with directive issued by the Chief, Army Security Agency. In addition to the units mentioned above which are allocated for the purpose of meeting such local requirements, other Signal Intelligence units and personnel of the Army Security Agency may be placed in the territory assigned to a major force or command in order to meet other than local tactical or security requirements. In such cases these units and personnel will be administered by the major force or command but will operate under direct control of the War Department, through the Chief, Army Security Agency. Major force commanders will be informed of contemplated changes in allocation of Army Security Agency units which he is administering.

5. The Chief, Army Security Agency, will be responsible for the following signal intelligence and communications security activities:

(a) The interception of radio and wire traffic, the location and identification of radio stations by electrical means, the analysis of radio and wire traffic, the solution of code and cipher messages and the preparatory arrangements for the employment and detection of secret inks.

(b) The organization, employment and operation of communications intelligence and communications security establishments, procedures and equipment within the Army, exclusive of message centers.

(c) Research and development of all items of equipment of peculiar interest to the Army Security Agency.

(d) Determination of the military characteristics of and the requirements for items of equipment peculiar to Army Security Agency.

-2-

~~SECRET~~

~~SECRET~~

AG 322 (4 Sep 45)OB-S-A-M   Cont'd   6 September 1945

(e) Research, development, preparation, publication, revision, storage and distribution of all cryptographic equipment and material (including codes, ciphers and secret inks) required by the Army; the establishment of procurement requirements and accounting for such equipment; and the maintenance of liaison with other agencies in connection therewith. The Army Security Agency may delegate such of these duties and responsibilities as appropriate to its field units or to major forces or commands.

(f) Cryptographic and transmission (radio, wire and carrier) security.

(g) Organization and training of all units, detachments and teams, and the training of all individual specialists assigned or attached to the Army Security Agency.

(h) Determination of doctrines, techniques and the preparation of field manuals and training literature.

(i) Preparation of tables of organization and equipment, allowances and distribution; expendable items lists; and military occupational specialties required by the Army Security Agency.

(j) Establishment of requirements for personnel and the assignment, transfer and promotion of such personnel in accordance with established War Department policies.

(k) Review of program of instruction in service schools training clerks, technicians and other specialists engaged in all phases of cryptographic work and for appropriate recommendations to the War Department.

6. The Chief Signal Officer of the Army will be responsible for providing communication facilities required by the Army Security Agency to and between forces and commands overseas. Major force commanders overseas will provide adequate communication facilities to the Army Security Agency within their respective commands.

7. The Troop Basis of major forces and commands will be adjusted to reflect the transfers effected under the provisions of paragraph 2 and to accommodate the Army Security Agency in their respective areas.

8. All facilities, equipment and records used in the operations of the units and personnel referred to in Paragraph 2 above, and all funds appropriated therefor, will be transferred to the Army Security Agency.

~~SECRET~~

~~SECRET~~

~~SECRET~~

AG 322 (4 Sep 45) O-O-B-M Cont'd 6 September 1945

9. Pertinent regulations, Tables of Organization and Equipment, field manuals, directives and instruction material, will be amended as necessary to conform herewith.

10. It is desired that strict compliance be made with the provisions of Paragraph 11, AR 380-5, 15 March 1944, to the end that dissemination of the above information is confined to only those individuals whose official duties require such knowledge or possession.

By order of the Secretary of War:

/s/ Edward F. Witsell

EDWARD F. WITSELL
Major General
Acting the Adjutant General

COPIES FURNISHED:
Secretary of War
Under Secretary of War
Divisions of the War Department General Staff
Divisions of the War Department Special Staff

DISTRIBUTION 1 (Less item 12)

~~SECRET~~

6 September 1945

Commanding General, US Forces, European Theater, Main
Frankfurt, Germany

Commanding General, USAF, Mediterranean Theater of Operations,
Caserta, Italy

Commanding General, USF, India Burma Theater, New Delhi, India

Commanding General, USF, China Theater, Chungking, China

Commanding General, Western Defense Command, Presidio of
San Francisco, California

Commanding General, Alaskan Department, Rear Echelon,
Fort Richardson, Alaska

Commanding General, Alaskan Department, Advance Command Post,
Adak, Alaska

Number: WARX 60368

From Chief Military Intelligence Service signed WARCOS.

Establishment on the Army Security Agency is subject. Scope of decision outlined in message WARX 53599 dated 22 August 1945 to centralize all Signal Intelligence Units and personnel includes all communications security establishments, units and personnel of the Army. War Department letter AG 322 (4 September 45) OB-S-B-M dated 6 September 45 subject as above, setting forth these decisions and the mission and responsibilities of Army Security Agency, being given airmail distribution. Desire radio report at an early date of communications security establishments, units and personnel your theater in categories similar to those requested in WARX 56718 for Signal Intelligence Units and personnel.

End

CM-OUT-60368 (Sep 45)

WAR DEPARTMENT
MILITARY INTELLIGENCE SERVICES
WASHINGTON 25, D. C.

11 September 1945

MEMORANDUM FOR THE CHIEF, ARMY SECURITY AGENCY:

SUBJECT: Organization of Army Security Agency.

1. Reference is made to AG 322 (4 Sep 45) OB-S-B-M, dated 6 September 1945, subject: Establishment of Army Security Agency.

2. Brigadier General Preston W. Corderman, O-16387, is designated Chief, Army Security Agency.

3. All existing directives from this office to Signal Security Agency, and all existing formal and informal arrangements for cooperation and communication between Signal Security Agency and the Military Intelligence Service, and all policies of the Military Intelligence Division applicable to the Signal Security Agency, will continue in effect with respect to Army Security Agency except as duly modified in accordance with established procedures.

4. It is desired that a plan for the organization of the Army Security Agency be submitted to this office on or before 14 September 1945. In view of the previous authorization of an aggregate strength of five thousand for Signal Security Agency for the postwar period, the plan of organization submitted should be accompanied by an explanation as to what parts of the proposed organization of Army Security Agency are deemed to represent a continuation of the activities and responsibilities of Signal Security Agency.

For the A. C. of S., G-2:

/s/ Carter W. Clarke
CARTER W. CLARKE
Brigadier General, GSC
Deputy Chief, MIS

Doc ID: 6579558

COPY

Classification (if any)

~~SECRET~~

War Department General Staff
DISPOSITION FORM

FILE NO. SUBJECT: Publication of Cryptographic Material

TO: The Adjutant General FROM ACofS, G-2 DATE 5 Oct 45 COMMENT NO. 1
Brig Gen. C. W.Clarke

1. The Chief, Army Security Agency, is charged with the responsibility for preparation, publication, and revision of all cryptographic material required by the Army, reference letter, Office of The Adjutant General, 6 September 1945,File AG 322 (4 September 1945) OB-S-B-M, subject: "Establishment of the Army Security Agency." Paragraph 4D, AR 380-5, 15 March 1944, states "All codes, ciphers, and cipher devices intended for use in the military service will be authorized only by the War Department."

2. In order to enable the Chief, Army Security Agency, to perform properly duties in connection therewith, it is requested that authorization be granted the Chief, Army Security Agency, to publish cryptographic material with the expression "War Department" in the heading of such publication, and the expression "By Order of the Secretary of War" followed by the printed signature of the Chief of Staff , as the authority for issuance.

3. It is further requested that authorization be granted to use the expression "Official, Edward F. Witsell, Major General, Acting, The Adjutant General" in connection with these publications.

4. Approval of the above requests will supersede authorization granted the Chief Signal Officer, contained in first indorsement of letter to The Adjutant General, 30 October 1945, from the Chief Signal Officer, copy of which is inclosed.

1 Incl
Cy ltr to TAG, 30 Oct 43

CLAYTON BISSELL
Major General, GSC
Assistant Chief of Staff, G-2

/s/ John Weckerling
JOHN WECKERLING
Brigadier General, GSC
Deputy A.C. of S., G-2

TO ACofS, G-2, WDGS FROM The Adjutant General DATE 19 Oct 45 COMMENT NO. 2

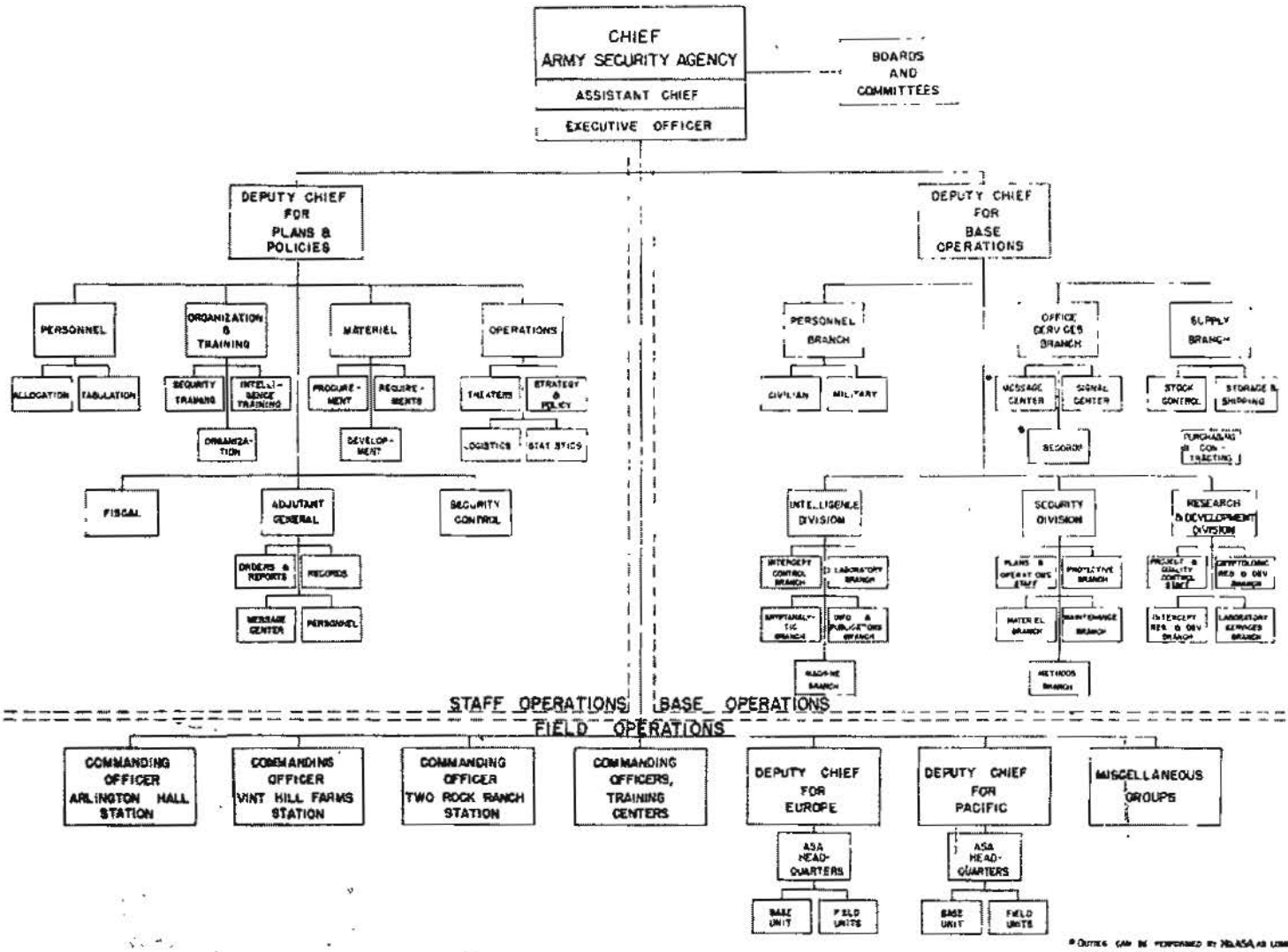
Approved.

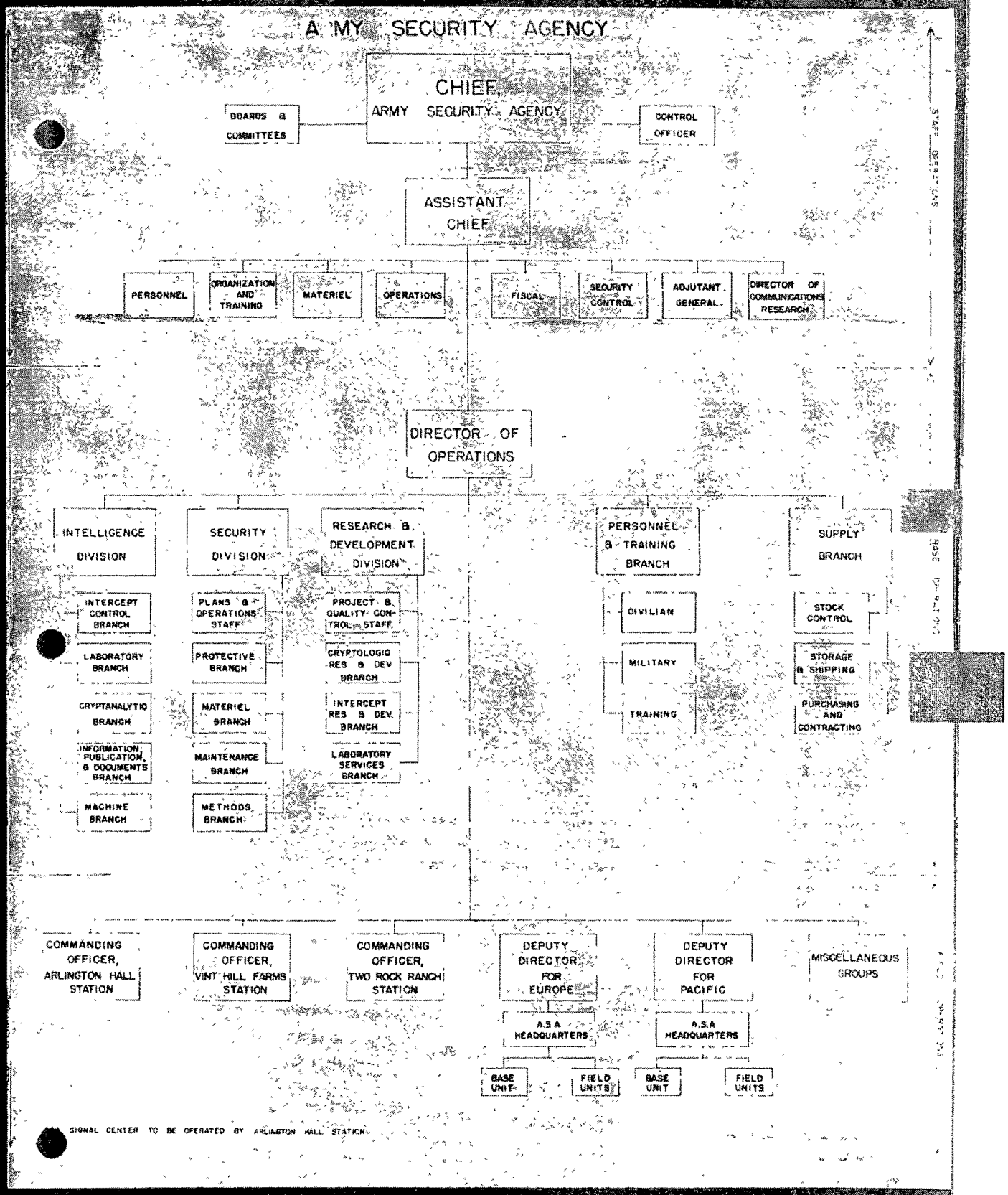
1 Incl
n/c

/s/ Edward F. Witsell, Major General
Acting The Adjutant General

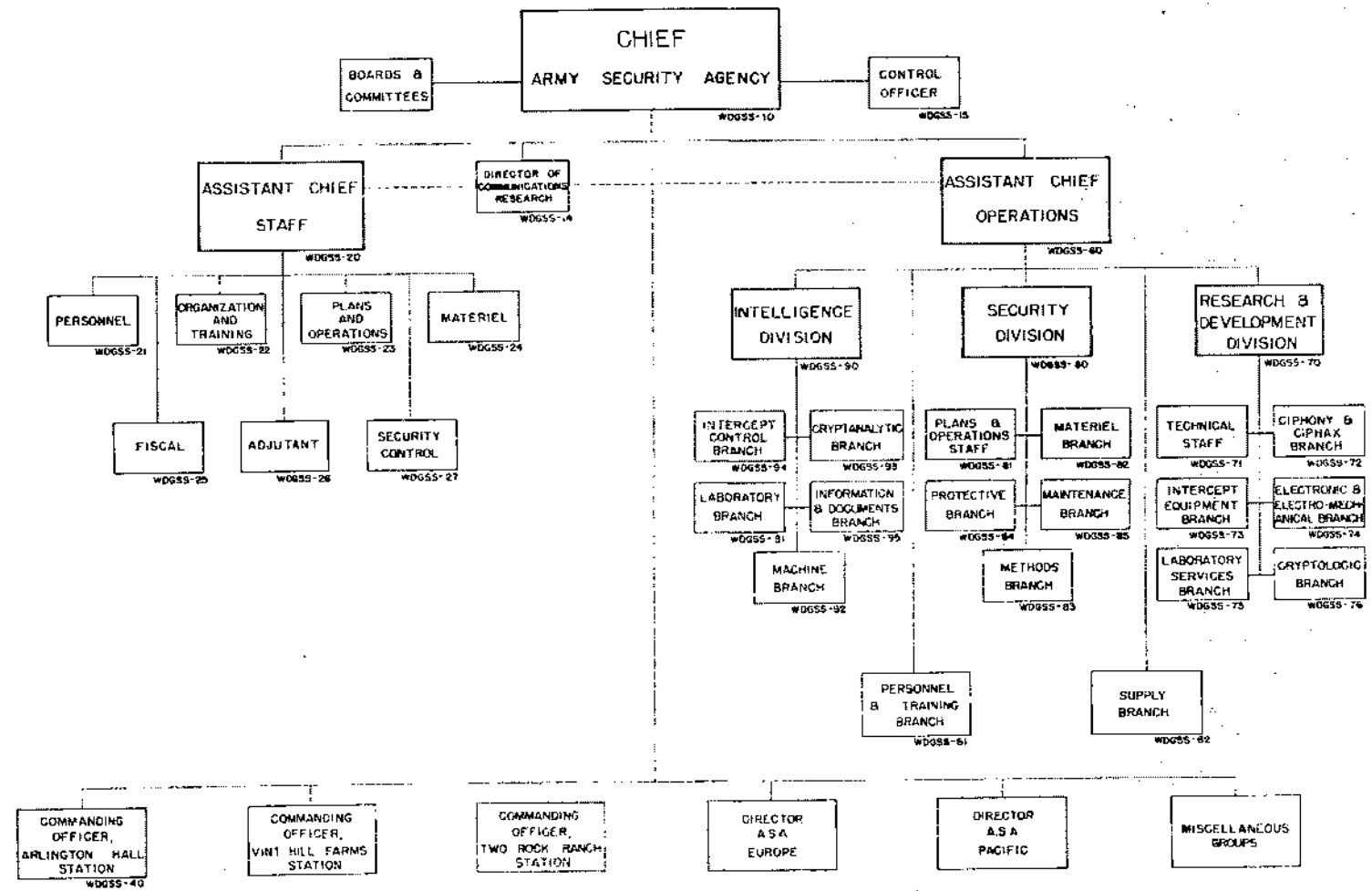
Doc 5

ARMY SECURITY AGENCY




ARMY SECURITY AGENCY
CHIEF, ARMY SECURITY AGENCY
BOARDS & COMMITTEES
CONTROL OFFICER
ASSISTANT CHIEF
PERSONNEL
ORGANIZATION AND TRAINING
MATERIEL
OPERATIONS
FISCAL
SECURITY CONTROL
ADJUTANT GENERAL
DIRECTOR OF COMMUNICATIONS RESEARCH
DIRECTOR OF OPERATIONS
INTELLIGENCE DIVISION
SECURITY DIVISION
RESEARCH & DEVELOPMENT DIVISION
PERSONNEL & TRAINING BRANCH
SUPPLY BRANCH
INTERCEPT CONTROL BRANCH
LABORATORY BRANCH
CRYPTANALYTIC BRANCH
INFORMATION, PUBLICATION, & DOCUMENTS BRANCH
MACHINE BRANCH
PLANS & OPERATIONS STAFF
PROTECTIVE BRANCH
MATERIEL BRANCH
MAINTENANCE BRANCH
METHODS BRANCH
PROJECT & QUALITY CONTROL STAFF
CRYPTOLOGIC RES & DEV BRANCH
INTERCEPT RES & DEV BRANCH
LABORATORY SERVICES BRANCH
CIVILIAN
MILITARY
TRAINING
STOCK CONTROL
STORAGE & SHIPPING
PURCHASING AND CONTRACTING
COMMANDING OFFICER, ARLINGTON HALL STATION
COMMANDING OFFICER, VINT HILL FARMS STATION
COMMANDING OFFICER, TWO ROCK RANCH STATION
DEPUTY DIRECTOR FOR EUROPE
DEPUTY DIRECTOR FOR PACIFIC
MISCELLANEOUS GROUPS
A.S.A HEADQUARTERS
A.S.A HEADQUARTERS
BASE UNIT
FIELD UNITS
BASE UNIT
FIELD UNITS
SIGNAL CENTER TO BE OPERATED BY ARLINGTON HALL STATION

ARMY SECURITY AGENCY



APPROVED 12 DECEMBER 1945

W. Preston Corderman

W. PRESTON CORDERMAN
BRIGADIER GENERAL, U.S.A.
CHIEF, A.S.A.

~~RESTRICTED~~ 25 Sept 45

OFFICE ORDERS

NUMBER 62

1. Effective immediately MAJOR ROWLAND H. GEDDIE, 0921519, Signal Corps, is relieved from assignment to Communications Branch and assigned to the Office of the Commanding General, Signal Security Agency.

2. Effective immediately MAJOR ROBERT S. HOFF, 0409796, Signal Corps, is relieved from assignment as Chief, Training Branch and assigned to the Office of the Commanding General, Signal Security Agency.

3. Effective immediately MAJOR JAMES C. TAYLOR, 01633006, Signal Corps, is relieved from assignment with Intelligence Division and assigned to the Office of the Commanding General, Signal Security Agency.

4. Effective immediately MAJOR VERN R. HATCH, 0466880, Signal Corps, is relieved from assignment to Security Division and assigned to the Office of the Commanding General, Signal Security Agency.

5. Effective immediately MAJOR WILLIAM F. DREES, 01635806, Signal Corps, is relieved from assignment as Adjutant, Second Signal Service Battalion and assigned to the Office of the Commanding General, Signal Security Agency.

6. Effective immediately 1ST LT JOHN P. MCGOVERN, 01647174, Signal Corps, is relieved from assignment with Traffic Analysis and Control Branch, Intelligence Division, and assigned to the Office of the Commanding General, Signal Security Agency.

7. Effective immediately CAPTAIN ROBERT E. TACHOIR, 01634388, Signal Corps, is appointed Chief, Training Branch, vice MAJOR ROBERT S. HOFF, 0409796, Signal Corps, relieved.

8. Effective immediately CAPTAIN OSCAR WILDER, JR., 0450947, Signal Corps, is appointed Adjutant, Second Signal Service Battalion, vice MAJOR WILLIAM F. DREES, 01635806, relieved.

9. Effective immediately there is established a Plans and Policies Staff, Signal Security Agency. The Plans and Policies Staff will report to the Office of the Commanding General. The following named officers are assigned to the Plans and Policies Staff, Office of the Commanding General:

MAJOR ROWLAND H. GEDDIE, 0921519, Signal Corps
MAJOR ROBERT S. HOFF, 0409786, Signal Corps
MAJOR JAMES C. TAYLOR, 01633006, Signal Corps
MAJOR VERN R. HATCH, 0466880, Signal Corps
MAJOR WILLIAM F. DREES, 01635806, Signal Corps
1st LT JOHN P. McGOVERN, 01647174, Signal Corps

WASHINGTON 25 D. C.
ARMY SECURITY AGENCY
HEADQUARTERS

10. The Board appointed per par 1, OO 56, dated 30 August 1945, and per par 1, OO 58, dated 12 September 1945, this headquarters, concerning the preparing of plans for the reorganization of Signal Security Agency is hereby terminated.

BY COMMAND OF BRIGADIER GENERAL COMBERMAN:

JAMES E. KENNEY
Captain, Signal Corps
Adjutatn

OFFICIAL:

/s/ James E. Kenney
JAMES E. KENNEY
Captain, Signal Corps
Adjutatn

Distribution:

Ea O concerned.....2
Ea O 201 file.....1
Adjutant, SSA.....1
Officer Pss Sec SSA.....1

HEADQUARTERS
ARMY SECURITY AGENCY
Washington 25, D. C.

WDGSS-43 23 November 1945

GENERAL ORDERS
NUMBER 1

ORGANIZATION OF THE ARMY SECURITY AGENCY

The following organization of Headquarters, Army Security Agency is effective as of 26 November 1945:

Office of the Chief, Army Security Agency
- Executive Office
- Control Office

Director of Communications Research

Office of the Assistant Chief (Staff)
- Personnel Section
- Organisation and Training Section
- Materiel Section
- Plans and Operations Section
- Adjutant Section
- Fiscal Section
- Security Control Section

Office of the Assistant Chief (Operations)
- Intelligence Division
  - Intercept Control Branch
  - Cryptanalytic Branch
  - Laboratory Branch
  - Information, Publication, & Documents Branch
  - Machine Branch
- Security Division
  - Plans and Operations Staff
  - Materiel Branch
  - Protective Branch
  - Maintenance Branch
  - Methods Branch

(over)

Doc ID: 6579558

[redacted]

WDGSS-43 (25 November 1945)

Research and Development Division
Cryptanalytic Branch
Cipher and Cipher Devices Branch
Intercept Equipment Branch
Electronics and Mechanical Engineering Branch
Laboratory Services Branch

Personnel and Training Branch

Supply Branch

[redacted]
Major General, USA
Director

DISTRIBUTION:

[redacted]

2

C
O
P
Y

~~RESTRICTED~~

HEADQUARTERS
ARMY SECURITY AGENCY
Washington 25, D. C.

WDGSS-43

23 November 1945

OFFICE ORDERS
NUMBER 81

4. Effective 26 November 1945, the personnel indicated below are relieved from their present assignments and are assigned as follows:

Position	Incumbent
Chief, Army Security Agency	Brig.Gen.W.Preston Corderman
Executive Officer	Lt.Col.Robert T. Walker
Control Officer	Lt.Col.Perry Molstad
Director of Communications Research	Mr. William F. Friedman
Assistant Chief (Staff)	Colonel George A. Bicher
Personnel Section	Major William F. Drees
Organization and Training Section	Major Robert S. Hoff
Materiel Section	Major Vern R. Hatch
Plans and Operations Section	Major Rowland H. Geddie
Adjutant Section	Lt.Col. Joseph W. Johnston
Fiscal Section	Captain Donald Phillips
Security Control Section	Captain James E. Kenney
Assistant Chief (Operations)	Colonel Harold G. Hayes
Intelligence Division	Colonel Frank B. Rowlett
Asst. Chief, Intelligence Div.	Lt.Col. James B. Greene
Intercept Control Branch	Major Everett N. Sieder
Cryptanalytic Branch	Lt.Col. Verner C. Aurell
Laboratory Branch	Lt.Col. William B. Fortune
Inf., Publ.& Documents Sec.	Captain Howard W. Martin
Machine Branch	Major Stephen W. Dunwell
Security Division	Colonel Matthew G. Jones
Asst. Chief, Security Division	Lt.Col. Russell H. Horton
Plans and Operations Staff	Lt.Col. Lawrence D. Prehn
Materiel Branch	Major William H. Innes
Protective Branch	1st Lt. Harold K. Landry
Maintenance Branch	Major George L. Sampson
Methods Branch	Lt. Col. Louis M. Myers

~~RESTRICTED~~

Doc ID: 6579558

~~RESTRICTED~~

WDGSS-43 (23 November 1945)

Position	Incumbent
Research & Development Division	Colonel Solomon Kullback
Asst. Chief in charge of Operations	Lt. Col. Leo Rosen
Cryptologic Branch	Major John N. Seaman
Ciphony and Ciphax Branch	Captain Daniel F. Hoth
Intercept Equipment Branch	1st Lt. Chas. J. Schierlmann
Electronics & Electromech. Branch	Major Howard C. Barlow
Laboratory Services Branch	1st Lt. Thomas L. Triolo
Personnel and Training Branch	Captain Harry O. Schloss
Supply Branch	Major Thurman R. Hamman

/s/ W. Preston Corderman
W. PRESTON CORDERMAN
Brigadier General, USA
Commanding

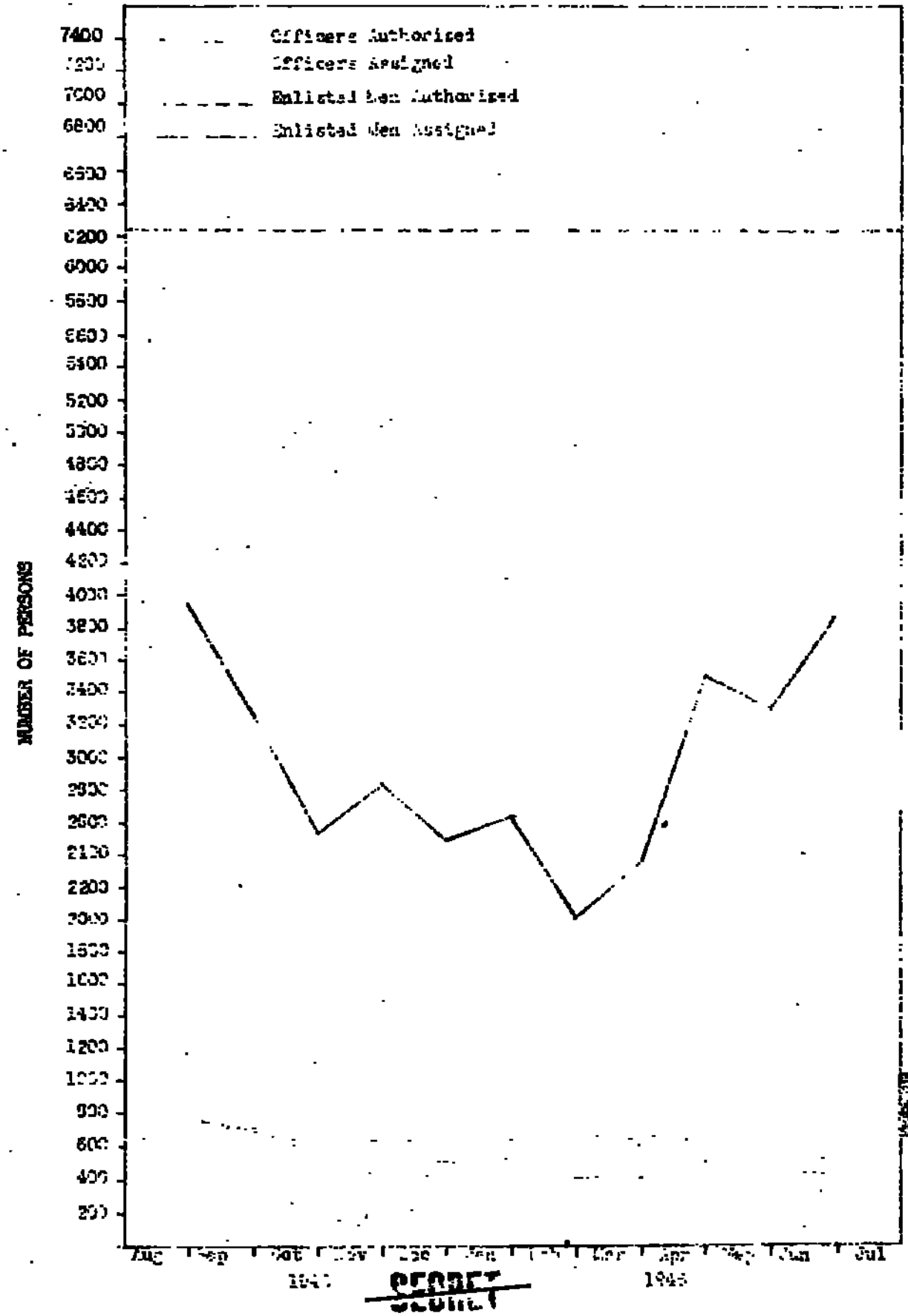
DISTRIBUTION
"A"

C
O
P
Y

~~RESTRICTED~~

Doc ID: 6579558

~~SECRET~~



~~SECRET~~

Doc ID: 6579558

COPY

~~CONFIDENTIAL~~

WAR DEPARTMENT
The Adjutant General's Office
Washington 25, D. C.

AG 353 (2 Nov 45)OB-S-B CM/mal 2B-939 Pentagon

19 November 1945

SUBJECT: Training of Individual Specialists.

TO: Commanding General, Army Service Forces
Chief Signal Officer
Chief, Military Intelligence, WDGS
Chief, Army Security Agency, Arlington Hall, Virginia

1. Reference is made to letter AG 322 (4 Sep 45)OB-S-B-M, 6 September 1945, subject: Establishment of the Army Security Agency.

2. Pursuant to the provisions of the foregoing letter, Army Security Agency is charged with responsibility for the specialist training of individuals of the following military occupational specialities:

Officer

Code	MOS
0225	Radio Intelligence Officer
0532	Communications Officer, Special (AM-2)
9240	Communications Security Officer
9600	Cryptanalytic Officer, General
9601	Cryptanalytic Officer, Code
9602	Cryptanalytic Officer, Chemical
9603	Cryptographic Officer, Equipment
9604	Cryptanalytic Officer, Translations
9605	Radio Traffic Analysis Officer
9610	Security Officer, Cryptanalytic

Enlisted

SSN	MOS
538	Voice Interceptor (Designated Language)
543	Radio Intelligence Control Chief
709	Traffic Analyst (Radio)
738	Intercept Operator, G
739	Intercept Operator, J
799	Intercept Operator, Fixed Station
807	Cryptographic Code Compiler
808	Cryptanalysis Technician
6809	Traffic Analyst, G
8709	Traffic Analyst, J

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

AG 353 (2 Nov 45)OB-S-B (cont'd) 19 November 1945

The Army Service Forces and the Chief Signal Officer are relieved of the responsibility for such individual specialist training.

3. The Army Security Agency will conduct the specialist training of cryptographic equipment maintenance and repair personnel (Code 9606 and MOS 801) until further notice.

By order of the Secretary of War:

/s/ Edward F. Witsell
EDWARD F. WITSELL,
Major General,
Acting The Adjutant General

COPIES FURNISHED:
Assistant Chief of Staff, G-1, WDGS (1)
Assistant Chief of Staff, G-2, WDGS (20)
Assistant Chief of Staff, G-3, WDGS (1)
Assistant Chief of Staff, G-4, WDGS (1)
Assistant Chief of Staff, Operations Division, WDGS (1)
Chief, Statistics Branch, General Staff (1)
The Inspector General (1)
Director, Legislative and Liaison Division, WDGS (1)
Director, War Developments Division, WDGS (1)
Director, Budget Division, WDGS (1)
Director, Civil Affairs Division, WDGS (1)
Director, Special Planning Division, WDGS (1)
War Department Manpower Board (1)
Director, Woman's Army Corps (1)

~~CONFIDENTIAL~~

Doc ID: 6579558

IMMEDIATE ACTION
~~SECRET~~

~~SECRET~~

WAR DEPARTMENT
The Adjutant General's Office
Washington 25, D.C.

AG 352 (6 Nov 45)
OS-I-B-M

20 November 1945.

SUBJECT: Assignment of Vint Hill Farms School

TO: Chief, Army Security Agency
Commanding General,
Army Service Forces
Chief Signal Officer
Chief, Military Intelligence Service

~~SECRET~~
Auth TAG
Initials
Date 20 Nov 1945

1. Reference is made to letter, this office, AG 322 (4 Sep 45) OB-S-E-M, 6 September 1945, subject, "Establishment of Army Security Agency".

2. a. Pursuant to the provisions of the letter referred to above, the installation known as Vint Hill Farms School, located at Vint Hill Farms Station, Warrenton, Virginia, is relieved from control of the Commanding General, Army Service Forces, and assignment to the Chief Signal Officer, and assigned to the Army Security Agency.

b. Vint Hill Farms School is reclassified as a special installation under the control of the Chief, Army Security Agency, for the training of individual specialists assigned or attached to Army Security Agency.

BY ORDER OF THE SECRETARY OF WAR:

Adjutant General.

Copies furnished,
Divisions of the War Department General Staff
Divisions of the War Department Special Staff

~~SECRET~~

~~SECRET~~
IMMEDIATE ACTION

COPY

CONFIDENTIAL

WDGSS-23 12 April 1946

MEMORANDUM FOR THE ASSISTANT CHIEF OF STAFF, G-2:

SUBJECT: Utilization of Highest Quality Scientific Laboratories and Personnel on Army Security Agency Research and Development Problems

DISCUSSION

1. The Problem

The Army Security Agency has a research and development responsibility in connection with the production of cryptomechanisms and in connection with intercept and cryptanalytic equipment, devices and principles. This function involves the application of scientific principles, devices and mechanisms of a complex and diversified character. The carrying out of these functions thus requires a wide range of technical abilities of the highest order. It is manifestly impracticable to assemble within the internal framework of the Army Security Agency a complete group of scientific specialists who are thoroughly qualified to carry out the many technical functions required. The efficient execution of the research and development responsibilities of the Army Security Agency, therefore, requires a logical, consistent program which will insure that insofar as practicable the best scientific brains of the nation are employed in connection with the work of the Agency.

2. Facts Bearing on the Problem

a. In the past, the principal effort by which scientific training and talents external to the Agency have been applied to the research and development program of the Agency has been by means of contracts with high grade industrial laboratories for development of particular devices. Such contracts have been entered into, for instance, with the Eastman Kodak Corporation, the Western Electric Company, and the Teletype Corporation. Much benefit has resulted from such contracts, but the total volume of work done by this method is not large. Attached as Appendix 1 is a list of previous development contracts awarded by Army Security Agency.

CONFIDENTIAL

COPY

b. During World War II, the services of technological specialists formerly connected with various laboratories in the United States was to some extent available by means of former employees of these laboratories being assigned, either in civilian or military capacity, to the Agency. In general, such personnel have by now either left the Agency, or will be leaving in the very near future, so they will not be of much further assistance within the internal organization of the Agency. Specific cases in point are Lt. Colonel [illegible] Fortune, Chemical Engineer of Eli Lilly & Company; Mr. Robert M. Morris, Development Engineer of the National Broadcasting Corporation; and Captain D. F. [illegible] of the Bell Telephone Laboratories.

c. The Army Security Agency requires technological specialists for use in other than the Research and Development Division. The duties of such specialists, however, will in most cases impinge upon research or development. Furthermore, the proposals outlined in this paper will, in most instances, apply to the carrying out of the technical work of all the units of the Agency.

3. Proposals Bearing on the Problem

a. Following are a number of proposals which are believed to offer promise in the solution of the problem of insuring that the best technical abilities of the nation are brought to bear on ASA research and development projects:

(1) To expand the program of awarding development contracts to industrial laboratories.

(2) To award development contracts to selected universities and other educational institutions.

(3) To retain specific scientists as consultants on special phases of the Agency research and development program. This may be done on a fee basis in a manner similar to that in which legal consultants are retained.

(4) To retain specific outstanding scientists as permanent part-time consultants at an annual compensation.

b. To insure that appropriate arrangements are made within the framework of the Agency to provide people of the proper background to analyze the development problems which will be encountered, the following proposals are made:

WDGSS-23 (12 April 1946)

(1) To procure an individual thoroughly qualified and experienced in the administration of research and development procedures to direct the organization of the Research and Development Division and to build it up to maximum efficiency.

(2) To adopt a long-range program for procurement and training of technical personnel. This program would involve meticulous selection of young graduates of technical and scientific schools, and the carrying out of a broad training program which will insure a thorough background to assist such technological personnel in the solution of the research and development problems which the agency will encounter in the future.

(3) To encourage technological personnel assigned to the Army Security Agency to join national engineering and technical societies, to attend the meetings thereof, and to develop their abilities by special studies.

(4) Engineers must investigate widely the methods, materials, procedures, techniques and developments employed in private industry. This will doubtless involve wide travel within the continental limits of the United States and might conceivably require travel abroad.

4. Reasons and Conclusions

a. The proposals in paragraph 3a above have to do with the assistance which might be secured from groups outside the Army Security Agency. The internal items covered by paragraph 3b are necessary to insure that whatever external program is planned is given intelligent and efficient direction from within the Agency. Appendix 1 indicates that the previous program of awarding development contracts to industrial laboratories has been very restricted in scope. For instance, 60 per cent of the money obligated for research and development contracts of the Agency for Fiscal Years 1943 through 1946 was covered by Western Electric contracts. Such a program might, to advantage, be more widely distributed. For the next few months some difficulty will doubtless be encountered in persuading industrial laboratories to accept development contracts, since most such companies are loaded to capacity with projects of immediate concern to the company involved, many of these projects having been originated through war-time developments. It seems likely, however, that in the long run the high-grade

industrial laboratories of this country will be glad to work on development projects of the Agency. The size and quality of personnel of many of these laboratories would make them invaluable in carrying out such development projects.

b. With regard to proposal 3a(2), there are a number of educational institutions which have done excellent work during World War II in connection with development problems of the armed services, and such institutions offer considerable promise as contractors for ASA development projects. Some cases in point are the Massachusetts Institute of Technology, Harvard University, University of Pennsylvania and the California Institute of Technology.

c. With regard to proposals 3a(3) and 3a(4), the list of individual top-flight scientists who might be available as consultants for ASA research and development work is extensive. Since, however, no consultative service of this type has so far been employed by the Agency, considerable "spade work" would be necessary before implementing this phase of the proposed program.

d. With regard to proposal 3b(10) the individual in charge of administration of the Research and Development Division of the Army Security Agency are well trained technologically and generally competent, but lack the broad experience essential to the building up of a high-grade research and development organization. An experienced administrator such as Mr. Jewett, retired former head of the Bell Telephone Laboratories, could be of inestimable value to the Agency in this critical period of the initial formation of the research and Development Division. It is recommended that Mr. Jewett or a similarly competent development administrator be secured and placed in charge of the research and development program of the Agency for at least twelve months.

e. With regard to proposal 3b(2), the procurement of young technical graduates should be most carefully planned and rigorous selection process established. It is suggested that a two-man team or teams be set up to make such selections. One member of this team would be a well-qualified, experienced personnel worker trained in psychometric techniques. The other member of the two-man team would be experienced in the technological fields for which it is desired to recruit new individuals. It is essential that this job of selection be placed upon a very high plane, and it is suggested that such recruiting of personnel be at least on the branch chief level or the equivalent.

[illegible]-23 (12 April 1946)

5. Availability of Funds

The fiscal regulations of the War Department will, in general, permit the carrying out of any or all of the proposals given above. It is common practice among the various arms and services for development contracts to be awarded to industrial laboratories and to educational institutions. Scientific consultants are also used occasionally by various services, although to a lesser extent than the awarding of development contracts to outside laboratories.

6. Security

Some difficulty in regard to security of classified projects will be encountered in connection with the use of outside agencies and individuals on the work of the Agency. This problem is, however, common to many other units of the armed services and with adequate planning and administration can be solved.

ACTION RECOMMENDED

That the proposals outlined in paragraph 3 above be adopted as a part of the major policy of the Army Security Agency, and that they be implemented in an orderly fashion. It is requested that the approval of the Assistant Chief of Staff, G-2 be given to this recommendation.

/s/ Harold G. Hayes
HAROLD G. HAYES
Colonel, Signal Corps
Chief, Army Security Agency

1 Incl
Appendix 1 -- Summary of ASA Development Contracts, FY 1943 through 1946

Appendix 1

CONFIDENTIAL

ASW (SSA) DEVELOPMENT CONTRACTS
FISCAL YEARS 1943 THROUGH 1946

Contractor	No. of Contracts	Amount Obligated	Amt. Expended
Acme Newspictures, Inc	1	$ 7,450	$ 7,450
Cincinnati Milling Co	1	5,628	5,628
Eastman Kodak Co.	1	47,255	47,255
General Radio Co.	1	1,350	1,350
Press Wireless Co.	1	32,500	32,500
Radio Corp. of America	4	93,553	None
Teletype Corp.	12	226,000	223,000
Western Electric Co.	18	1,745,928	1,063,198
Western Union Tel. Co.	1	6,315	6,315
TOTAL	40	* $2,165,979	$1,386,696

* (80% W. E. Co.
(10% Tel. Corp.

CONFIDENTIAL

D: 6579558

	Amount Obligated	Amount Expended
FISCAL YEAR 1943	$ 232,509.31	$ 232,509.31
FISCAL YEAR 1944	779,070.58	718,865.58
FISCAL YEAR 1945	1,145,802.14	429,765.69
FISCAL YEAR 1946	8,598.49	5,555.11
	$2,165,980.52	$1,386,696.69

1942-43 Fiscal Year 1943

Date	Contract No.	Company	Amt. Obligated	Amt. Expended
8/1/42	2	Western Union Tel. Co.	$ 6,315.00	$ 6,315.00
8/22/42	7	Teletype Corp.	7,000.00	7,000.00
10/8/42	10	" "	20,000.00	20,000.00
10/16/42	11	Western Elec. Co.	30,000.00	30,000.00
12/24/42	12	Teletype Corp.	90,000.00	90,000.00
12/30/42	16	" "	8,000.00	8,000.00
1/21/43	18	Western Elec. Co.	50,000.00	50,000.00
1/25/43	19	" " "	2,394.14	2,394.14
1/23/43	20	General Radio Co.	1,550.17	1,550.17
2/4/43	22	Teletype Corp.	10,000.00	10,000.00
5/10/43	33	Home News Pictures Inc.	7,450.00	7,450.00
		TOTAL	$232,809.31	232,809.31

1943-44 Fiscal Year 1944

Date	Contract No.	Company	Amt. obligated	Amt. expended
10/26/43	7	Western Elec. Co.	25,000.00	25,000.00
10/22/43	9	Teletype Corp.	50,000.00	50,000.00
10/15/43	579	Western Elec. Co.	461,464.00	461,464.00
11/1/43	11	Radio Corp. of America	60,000.00	Cancelled
7/3/43	361	Western Elec. Co.	14,691.18	14,444.18
12/16/43	16	" " "	100,000.00	100,000.00
12/20/43	18	" " "	20,540.00	20,540.00
1/31/44	27	" " "	1,867.40	1,867.40
1/22/44	20	Press Wireless, Inc	32,500.00	32,500.00
Feb. 44	24	Teletype Corp.	4,000.00	4,000.00
Feb. 44	25	" "	3,000.00	3,000.00
		TOTAL	779,070.58	718,865.58

1944-45 FISCAL YEAR 1945

Date	Contract No.	Company	Amt. Obligated	Amt. Expended
3/13/44	3	Western Elec. Co.	$ 1,502.96	$ 1,502.96
5/10/44	11	Radio Corp. of America	4,500.00	Cancelled
2/26/45	48	Western Elec. Co.	7,600.00	7,600.00
4/12/45	53	" " "	3,996.50	3,996.50
6/30/45	58	" " "	4,076.91	4,076.91
7/31/46	34	Radio Corp. of America	27,650.00	
8/12/45	28	Eastman Kodak Co.	47,255.35	47,255.35
8/18/45	579	Western Elec. Co.	53,417.07	8,122.68
8/18/45	29	" " "	75.50	75.50
9/27/45	23	Teletype Corp.	21,000.00	21,000.00
9/27/45	24	" "	5,500.00	5,500.00
10/18/45	35	Western Electric	48,700.00	48,700.00
9/27/45	25	Teletype Corp.	4,500.00	4,500.00
12/30/45	42	Western Electric	907,500.00	271,908.00
6/18/45	55	Cincinnati Milling Co.	5,627.85	5,627.85
6/26/45	57	Teletype Corp.	3,000.00	Cancelled
		TOTAL	$ 1,145,802.14	$ 429,765.69

1945-46 FISCAL YEAR 1946

Date	Contract No.	Company	Amt. Obligated	Amt. Expended
10/30/45	62	Western Electric Co	$7,195.41	$ 5,556.11
12/31/45	34	Radio Corp. of America	1,403.08	
		TOTAL	$ 8,598.49	$ 5,556.11

COPY

~~CONFIDENTIAL~~

1st Ind.

A.C. of S., G-2, WDGS, War Department, Washington 25, D. C. 25 APR 1946

TO: Army Security Agency, Washington 25, D. C.

1. The recommendations as proposed in the basic communication are approved.

2. It is desired that this plan be implemented in an orderly fashion and that it be put into effect as funds and personnel become available.

3. It is further desired that the following be incorporated into the basic plan:

a. In contracts granted to industrial laboratories, arrange to have a prescribed number of personnel, permanently assigned to ASA, trained in that laboratory and work on the ASA project during its development.

b. In contracts granted to universities, arrange to have a prescribed number of ASA personnel enrolled in that university for study of subjects pertinent to ASA's needs and, at the same time, work on the ASA project under development at that university.

4. Periodic reports are desired which show the progress made in this program.

/s/ Hoyt S. Vandenberg

HOYT S. VANDENBERG
LIEUT. GENERAL, USC
A. C. of S., G-2

~~CONFIDENTIAL~~

COPY

55-14

UNCSS-70

6 June 1946

SUBJECT: Comments on Staff Study Concerning Utilization of Highest Quality Scientific Laboratories and Personnel on Army Security Agency Research and Development Problems

TO: Deputy Chief, Army Security Agency

1. In accordance with inter-office memorandum of 20 May 1946 from the Deputy Chief, Army Security Agency, there are submitted herewith comments on the Staff study concerning Research and Development Division personnel and facilities.

2. The comments are divided into two major classes:

a. Certain comments on the subject as a whole in as much as this is the first opportunity that the Research and Development Division has had to review the staff study, and

b. Comments regarding the possible means of implementing the specific recommendations in the Staff study as requested in Paragraphs 2 and 3 of the memorandum dated 20 May 1946.

3. In view of the fact that in the Agency there was no one organization specifically charged with research and development prior to the establishment of the Research and Development Division, and that the major emphasis during the war years was in the development of specific items of equipment, the fact that contracts were let to only a small number of commercial firms is not surprising. Contracts were let to those firms which, in the opinion of the Commanding General of the Agency, the Director of Communications Research, and responsible engineers, were best suited, both in facilities and knowledge of techniques, to conduct the work most efficiently and expeditiously which was of prime importance to the war effort.

4. It is the opinion of the Research and Development Division that there must not be overlooked the fact that the achievements of the Agency in the research and development field were not, and are not now, insignificant; and that there is available in the Army Security Agency, a staff of competent scientific personnel which in many fields is at least on a par with the personnel which staff the best laboratories and university departments in the world.

5. One item not discussed in the Staff study, but which is considered of importance for the efficient conduct of research and development is the consideration of the physical plant. The shop and laboratory facilities available are better than adequate and this fact is definitely appreciated by the Research and Development Division. However, the partitioning of the office and laboratory areas into small work rooms would, it is believed, enhance considerably the over-all efficiency of the operations. The separation of laboratory and office areas into small work rooms is standard practice in Signal Corps laboratories and in commercial laboratories.

6. Another important consideration not discussed in the Staff study is the general rules and regulations under which research and development must operate. In this connection, it is important to point out the fact that RCA has recently set up its research facilities in a separate organization independent of the RCA operations, because it was found that the research and development activities could not function efficiently under the same regulations that were designed for the RCA operating agencies. Current Army supply regulations were designed for the efficient supply operations of tactical units and are definitely not conducive to the most efficient operation of research and development. It is recommended that a policy be established for obtaining the best laboratory equipment and components obtainable replacing the current requirement that such material, often barely adequate, be obtained from depot stocks or on the basis of lowest commercial bids. It is recommended that serious consideration be given to the establishment of a procedure which will expedite the action on supply requisitions and purchasing orders, in order to diminish the delays inherent in processing such papers after they have been forwarded from the requesting units--such procedures not being in accord with established commercial practices.

7. Another item of importance which was not discussed in the Staff study is the question of the conversion of military personnel of high caliber now in the Agency to civilian status with the Agency. Newly employed scientific personnel will be of little value to the operations of the Agency for at least a year or more unless the staff is complemented by a number of high grade personnel currently attached to the Agency, who are familiar with the special techniques and methods peculiar to this Agency alone, and who have made important contributions thereto. The following are some of the reasons which according to their statements have induced desirable personnel not to convert to civilian status with this Agency:

a. Supply difficulties mentioned above.

b. Continual volume of "red tape" with which top grade scientific personnel are involved because of the fact that they are in supervisory positions.

c. The apparent instability of both military and civilian personnel policies resulting from continual changes in the discharge program as well as changes in civilian personnel allocations.

d. The extreme difficulty and considerable administrative work encountered in obtaining specific Civil Service job allocations.

e. The fact that specific technical experience gained at the Agency can not be disclosed outside the Agency and, therefore, contributes no weight to the ability of scientific personnel attempting to obtain better positions in the commercial fields.

It is recommended that, insofar as it is within the power of the Agency, such action be taken as will lead to the conversion to a civilian status of the greatest number of desirable personnel.

8. It is recommended that a scientist experienced in practices of commercial laboratories be invited to visit the Army Security Agency in a consultant capacity for the purpose of reviewing the recommendations of Research and Development Division officials with reference to the research and development operating frame-work of the Agency as well as the methods, practices, and established plans for the internal operation of the Research and Development Division. After such review, this consultant would prepare a report consisting of comments on these recommendations and, also, of further recommendations designed to establish research and development within the Agency on an efficient a basis as comparable to the practices of commercial laboratories as is feasible. This consultant should be of the level of the director or chief engineer of one of the best commercial laboratories in the country.

9. The subject memorandum makes no mention of technical cooperation or coordination with other government laboratories. Due to the nature of the relationships involved, these laboratories should be a major source of information and assistance to local scientific personnel. It is recommended that the Army Security Agency establish a policy which will enable research and development personnel to expand considerably their liaison with laboratories of the Army Air Forces, Navy, Signal Corps, and other governmental agencies. Such liaison should not only consider problems having a specific bearing on current projects but should, also, involve mutual consideration of operating practices and newly developed techniques.

10. References Paragraph 3a(1), Subject memorandum:

a. Since the establishment of the Research and Development Division, contacts with industrial firms with reference to possible development contracts have been conducted on a wide distribution. Since 1 January 1946, thirty-nine firms have been contacted by mail with reference to thirteen different contracts. Subsequently, eight firms were contacted in person. It is expected that four contracts will have been executed by 30 June 1946. One of these contracts is for three items of equipment, while another is for four items. In addition to the above, it is planned in the immediate future to contact nineteen firms in connection with two new contracts. This wide distribution of commercial contacts and the method employed have provided satisfactory results when the current unstable situation in industry is considered. In

the future, it is planned to continue this method with no appreciable change.

b. The possibility of establishing contracts for research and development with industrial firms is not encouraging. Contacts by representatives of this division indicate that the present situation will exist for several years in the future at least. Firms are anxious to resume commercial research and development based on technical advances accomplished during the war. Also, commercial firms are not eager to accept government contracts because of the security restrictions involved and because government regulations pertaining to contractual details are considered too binding and impractical.

c. Reference Paragraph 3a, 1st Indorsement, Subject memorandum: It is necessary that close liaison be maintained with contractors. Full time liaison, as recommended in this indorsement, is not generally warranted, however, because:

(1) In industrial laboratories engineers very seldom devote full time to one specific project.

(2) Liaison engineers are only needed at the contractors laboratories during the design and testing phases of a project, whereas, considerable time is devoted to construction.

(3) The legal difficulties involved in assigning a representative of a government agency to a commercial laboratory on a full time basis are considerable.

It is recommended that a policy be adopted whereby liaison engineers assigned to contracts continue close liaison during the design phases of the problem and conduct lengthy liaison during testing phases. It is believed that continuous work of Army Security Agency personnel at industrial laboratories is desirable only in cases of large procurement contracts involving the training of maintenance personnel.

d. The successful accomplishment of the provisions considered in this paragraph are contingent on the availability of sufficient technical personnel to permit extended temporary duty without impairing local operations, as well as sufficient funds to permit such temporary duty. The recommended program would require the expansion of financial and personnel budgets considerably in excess of current allocations.

11. Reference to Paragraph 3a(2), Subject memorandum:

a. Contracts with universities of necessity would be of a research nature along lines of special mathematical or engineering problems. It is impractical for universities to undertake problems of equipment development or problems involving cryptologic techniques, because their personnel possess insufficient background and experience for such work. Fundamentally, research is based on a contemplated future need and is basically responsible for the

technical advancement of any laboratory. The establishment of a research program requires that Army Security Agency exhibit a more sympathetic attitude toward pure research than has been exhibited in the past. At present, there is no opportunity for conducting a satisfactory research program because personnel and facilities are devoted to equipment development of an urgent nature. The establishment of a research program requires that high grade scientists devote considerable time to the formulation of problems and to liaison with contracting universities. It is recommended that sufficient personnel be allocated to execute the division mission of equipment development and, in addition, to conduct a program of basic research. If it is impossible to allocate sufficient personnel for both types of endeavor, it is recommended that this division be authorized to divert to basic research 10% of the personnel currently assigned to equipment development.

b. The Signal Corps has established research contracts with such universities as M.I.T., Duke, Columbia, and Harvard on problems such as design of crystal oscillators, vacuum tube studies, and the like. Such contracts are handled in a manner similar to commercial contracts. Such projects are limited as to scope and extent and are usually of a "Restricted" classification. It is the opinion of this division that contracts with universities should be considered in only rare instances or as a last resort. In general, research can be conducted much more efficiently in the local laboratories where scientists understand the entire background as well as associated problems relating to a specific project.

c. Reference to Paragraph 3b, 1st Indorsement, Subject memorandum: The enrollment of Army Security Agency personnel in universities is very desirable. However, such a program should only be contemplated in a situation where the local staff is so large that operations will not be impaired appreciably by the absence of technological personnel. In general, the Agency would benefit more by the liaison of its scientists with the scientists directing the university projects and by frequent liaison on the part of Army Security Agency project engineers who would be able to return and discuss the ramifications of the project locally. Furthermore, there is no assurance that personnel, having been educated at universities, would return to employment at the Army Security Agency. A more practical policy of assigning university projects to selected promising students who could be later induced to employment at Army Security Agency is recommended.

12. Reference to Paragraph 3a(3), Basic memorandum:

a. It is a recognized fact that all research and development should be guided by the suggestions of competent scientists possessing extensive education and practical experience. The research and development problems of the Army Security Agency are such that in only a very few instances is the requirement removed from the peculiar problems of the Agency itself. To provide effective service, a consultant, therefore, must acquire a technical background within the Agency. This requirement presents a major obstacle to a program of obtaining the services of high grade consultants.

b. If, in the future, sufficient funds are available, it is the intent of this division to attempt to obtain outside consultation on those problems in communications, electronics, statistics, and the like, which do not require a detailed knowledge related to the cryptologic arts. It is pointed out that War Department Circular CPR-35.9 limits the rate of compensation for intermittent consultant service to $25.00 per day. It is extremely doubtful that a highly qualified scientist can be retained at this low salary.

c. With a full knowledge of the difficulty of obtaining outside consultation service, the Research and Development Division has established a staff of technical consultants to serve the division and the Agency as a whole. Personnel assigned to this staff must be highly competent and must possess an extensive background of education and training. Fields presently covered on the Technical Consultants Staff include cryptology, mathematics and statistics, physics, electrical engineering, phonetics, and communications engineering. Civil Service vacancies have been established for a Mechanical and Industrial Processes Engineer and for a UHF and Electronics Engineer as well as for qualified assistants to several consultants. It is believed that this staff will satisfy a large portion of the need for highly qualified scientists on a consultant basis.

13. Reference to Paragraph 3a(4), Subject memorandum:

a. WD CP Circular Number 54, dated 1 May 1946, abolishes the per annum part-time appointment for consultation and places all such cases on a "when actually employed" basis.

b. It is the opinion of this division that the Technical Consultants Staff (paragraph 12c above) provides, in an entirely satisfactory manner, the service which paragraph 3a(4) recommends.

c. Contracts with commercial firms provide another form of valuable consultant service. The Agency benefits not only from the specific work of the contractor, but also obtains considerable benefit from the contacts of liaison engineers with the engineers of the various firms.

14. Reference Paragraphs 3b(2) and 4c, Subject memorandum:

a. Any thought or plan of a long-range program for procurement and training of technical personnel must take into account the following contacts or activities already initiated: the contacts of the Division representatives with 22 of the most outstanding colleges and universities in the country and their discussions with the staff members relative to possible future needs; discussions with and personnel requests to the National Roster of Scientific and Specialized Personnel concerning present and future needs; the search for technical or scientific personnel through the National Research Council, American Institute of Physics, Engineering Societies Council, Institute of Radio Engineers, Office of Scientific Personnel, and the Institute of Mechanical Engineers; a survey now under way to secure listings of all Army

Officers who graduated from the M.I.T. Radar School during the period from 1 July 1944 to 30 June 1945; the current search for personnel (and resulting contacts) in the monthly publications of Electronics, Proceedings of the I-R-E and Waves and Electrons, Machine Design, and the Journal of Applied Physics; replies to date covering more than 48 Position Wanted ads in current newspapers; the request already made to Personnel and Training Branch to send, at a later date, Division representatives out to the large engineering research laboratories in the country in order to obtain the services of any of the former or retired employees; the constant probing for "leads" from personnel employed now at the Agency, which factor has already produced material results.

b. Such a procurement program as is proposed was carried out by the Research and Development Division during the period 22 March 1946 - 29 April 1946. Nine representatives of the division interviewed during the above period, 210 technical graduates at the following colleges and universities: Brooklyn College, Columbia University, New York University, Cornell University, Iowa State College, University of Wisconsin, University of Illinois, University of Minnesota, Illinois Institute of Technology, Yale University, Massachusetts Institute of Technology, Virginia Polytechnic Institute, Duke University, University of North Carolina, University of Maryland, Pennsylvania State College, Carnegie Institute of Technology, University of Pittsburgh, Ohio State University, Purdue University, Georgia School of Technology, Agricultural and Mechanical College of Texas. The evaluations by the Division representatives of the 210 students interviewed were seriously and closely made as is evidenced by a detail study of the SF #57 applications received, the qualifications of those recommended for definite employment, the qualifications of those not recommended. From the total number interviewed, 61 were recommended as potentially good for employment on the basis of above-average scholastic background; success in any former experience; aptitude for research as determined through the technical competency and experience of the Division representatives themselves; evident interest in analysis, research, and electronics; recommendations of the university staff members. Of the balance, all were considered very mediocre or below. 71 applications have been received to date of which 49 persons are available on or before June 1946, 12 are available for the month of September 1946, four are available for the month of December 1946, six will not be available until 1947. In view of all existing regulations concerning preference status for appointments, it has been necessary to employ or to choose for employment applicants from the group of 47 applications of Veterans. Six WD Form 72's have been submitted to Personnel and Training Branch to date for initial appointments. Commitments of P-1 or higher level jobs are pending 1 June in the cases of five additional applicants. 15 applications are being held in abeyance purposely until further information is received relative to personnel and budget allotments. All arrangements for the above program, i.e., the original letters of survey to the colleges and universities to determine the ones to yield the most results, correspondence relative to setting interviewing dates, mapping out itineraries, follow-up letters of appreciation, were made by the Personnel and Training Branch in coordination with Research and Development

Division. Upon receipt of the above applications, all were screened very closely according to current appointment policies, Schedule A and U.S.C.S.C. Department Circular 549 qualification requirements, the experience and training requirements pertinent to each Branch having vacancies, and the recommendations of the Division representatives. However, the final selection has been left to the judgment of the Branches concerned. This has been the policy in the cases of all applicants for employment regardless of the source.

c. Reference is made to the estimated personnel allotment reports required to be submitted 23 May 1946. The first report was a distribution of the approved 351 jobs according to grades; the second report, a distribution of 314 jobs to meet an expenditure of $766,000 (old salary rates); the third report, a distribution of 264 jobs to meet an expenditure of $765,600 (new salary rates). Actually, the closest obtainable budget figures were as follows: on the basis of 351, an expenditure of $1,103,783.80; on the basis of 314, an expenditure of $989,935.80; on the basis of 264, an expenditure of $851,063. The picture of the current personnel situation, with respect to the present strength, estimated military personnel to accept civilian jobs, those already employed but not as yet on strength, and requests outstanding, is as follows:

Present Civilian Strength -	182
Estimated conversion of Mil. Pers. to Civ -	29
WD #72 appointment actions (spec. cases) -	57
WD #72 blanket requests (critical) -	42
TOTAL	310

d. It is believed that the above program has been as extensive as possible within the regulations and procedures under which it was executed. The program failed to produce personnel in the P-5 and P-6 categories because of the overwhelming competition of commercial laboratories. Attempts to recruit such personnel are continuing. Current cuts in allocated strength make it imperative that the division employ immediately personnel to bring its strength to maximum. Future vacancies can be created only by resignations or by increased allocations as are required to fulfill the recommendations of the subject memorandum.

e. The small staff currently available to the division combined with the urgency of development projects makes it imperative that newly employed engineers be assigned immediately to specific jobs. The major portion of the training received by such engineers is therefore on-the-job training. If a considerable addition to the authorized personnel strength is made a more satisfactory program of training will be instituted.

15. Reference Paragraph 3b(3), subject Memorandum,

a. Technological personnel can be encouraged to join technical engineering and technical societies providing their position is such that they can take a reasonably active part in the operations of such societies. To this end it is necessary that the Army Security Agency exhibit a sympathetic attitude toward the attendance of personnel at meetings of the societies. In addition the presentation of papers of an unclassified nature by scientific personnel of the Army Security Agency should be encouraged. It is recommended that the Agency establish a definite policy of sending on orders at least two technically qualified members of the Agency to all meetings of societies of related professional fields.

b. The following recommendations are made with reference to special studies pursued by technological personnel.

(1) That the Agency adopt a liberal policy in granting leave for study in the various universities.

(2) That the Agency establish a policy for ordering specific personnel to special laboratories, schools, etc., for the purpose of studying specific techniques.

(3) That provision be made for building up the technical library with literature pertaining to such special studies.

c. That every effort be made by the Army Security Agency to recognize such special studies. Recognition can be of the form of promotion, commendation, special effort to recognize the individual as a specialist in that field and the like.

16. Reference to Paragraph 3b(4), subject memorandum:

The requirement for occasional visits to commercial firms and other laboratories will be the natural result of contacts established in connection with commercial contracts, technical society memberships, personal contacts, and, particularly, perusal of technical literature. Again it is emphasized that a considerably larger technical staff will be necessary before the Agency can affect (to any great extent) the prolonged absence of personnel. Accomplishment of the recommendations of this paragraph also requires that the Agency establish a sympathetic attitude toward requests for a reasonable amount of such travel.

17. The Research and Development Division recommendations, paragraphs 2-9, and the division recommendations for implementing the program of the subject memorandum, paragraphs 10-16, form the frame-work of a plan which would vastly increase the ability of Research and Development Division to effectively accomplish its mission. It is pointed out that

the accomplishment of the plan depends mainly upon a very considerable increase in the allocation of technical personnel, particularly in the category of P-4, P-5, & P-6. In addition, a much expanded fiscal budget is required. If such personnel and funds are not available, it will be necessary to institute an entirely different and contracted plan than that contemplated. It is recommended that an indication be obtained that such personnel and funds will be available before any further detailed work toward establishing this plan is pursued. It is further recommended that such planning as affects this division be coordinated with the Research and Development Division in every detail.

S. KULLBACK
Chief, Research and
Development Division

~~CONFIDENTIAL~~

ARMY SECURITY AGENCY
WASHINGTON 25, D. C.

WDGAS-14 14 June 1946

SUBJECT: Comments on Staff Study on Research and Development

TO: Deputy Chief, Army Security Agency

1. The staff study on the Utilization of Highest Quality Scientific Laboratories and Personnel on the Army Security Agency Research and Development Problems has been carefully noted and comments thereon follow. (References correspond to numbered paragraphs of the staff study.)

[1] 2. The statement of the problem is quite succinct, but it fails to note the primary reason why the ASA in its research and development program is confronted with special difficulties and problems not encountered elsewhere, either in other governmental research and development agencies or in commercial research and development laboratories; viz, that the field of work (cryptologic engineering) is so highly specialized and is so little needed in or investigated by purely industrial organizations that there exists, outside the ASA (and its Navy counterparts), no pool of talent or facilities to which the ASA can look for material aid in its basic problems. This fact, in final analysis, means that special emphasis should be laid upon the last sentence of Paragraph 1 of the study and that the ASA scientific personnel and facilities for research and development must be made practically self-sufficient: not much help can be expected from the outside. Furthermore, in view of the extremely limited commercial or governmental demand for talents of the kind required, it must be realized that thoughtful, highly gifted young engineers will hesitate to enter upon a career in a field wherein, after ten or fifteen years' work, they may find themselves out of a job (because of lack of appropriations or for other reasons) and unable to obtain commercial employment in their chosen field; or they may find themselves in a position where they must accept, with as good grace as possible, whatever unpleasant or undesirable conditions they are expected to surmount in government service: changing employers, for them, is more or less out of the question. I think that the staff study should have brought out these elements in the picture, too, and that special consideration should have been given to ways and means for insuring that "career men" need have no fears for their future, in respect to either their tenure of employment or their rate of advancement.

SIS DATE: 4 Jun 2016

~~CONFIDENTIAL~~

[2] 3. With regard to the apparently limited or restricted scope of previous programs of awarding development contracts to industrial laboratories, it may be pointed out that the nature of the equipment required is such that commercial laboratories can hardly be expected to contribute much in the way of improvements on existing equipments or of inventions of new equipments. First hand experience with the results of independent research and development of cryptographic equipment by commercial firms has in the past been very disappointing, as evidenced in the equipments constructed by the International Telephone and Telegraph Company and the International Business Machines Company, to mention but two examples. And, of course, no commercial laboratories find need to work in the cryptanalytic equipment field. Broaden the scope of outside development contracts as we may, I think we will find commercial laboratories competent only to develop subsidiary elements of our equipment, not the basic elements. Furthermore, a mere increase in the number of firms to which contracts are awarded would not mean that the program is widened; and it might mean decreased security. The case of the development of Converter M-134C may here be cited. This was done by the Teletype Corporation, a firm selected originally by the Navy and the selection was concurred in by the Army. The remarkably efficient machine constructed by that firm testified to the wisdom of the selection; and when other cryptographic equipments were to be built, the same firm was naturally selected, not only because of the background skill and experience already attained, but also because there was a desire not to bring other firms into the picture, for this would entail delays for "clearance" and additional security hazards. In its selection of commercial laboratories, the ASA has been and should continue to be extremely careful to choose the most competent organization: if that means restricting the number of firms brought in, it is only a natural consequence of the peculiar situation in which the ASA finds itself.

[2 b] 4. The facts cited in this subparagraph bolster the conclusion that we should have made employment within the ASA so attractive that personnel of the type named would have stayed with us. Had there been a large monetary gap between what a career in the ASA offered and what a return to the commercial field offered, their choice would have been easy to understand; but the monetary gap was not large, so that it is clear there were other factors that determined the decision. It is these "other factors" that we should look into more carefully. As a matter of fact, cases are coming to attention constantly wherein the reasons for separation stem not from dissatisfaction with salary at all but from other "irritants of government civil service". Unless some of these are eliminated or ameliorated, we

can expect to continue to lose good people and of such of them as stay we can expect less than 100% efficiency. Specific points in this regard should be collected, studied, and investigation made as to how they can be corrected as soon as possible.

[5a(1)&(2)] 5. These are both good proposals, but because in many cases the kind of contracts we might want to place with an industrial laboratory or with a university staff* would call only for certain types of special studies and not for the delivery of a piece of equipment, I foresee many difficulties in getting sure contracts approved, under the present regulations. Possibly this field should be explored to see if we cannot get a more liberal interpretation of the regulations, so that a report and not a finished piece of equipment can be the subject of a contract.

[5a(3)&(4)] 6. I assume that the Staff has investigated this and found that it can be done legally. If this is so, it may be that we would do well to canvass the possibilities for specific men and try to get them to learn something about cryptology and to a much greater extent than covering merely the simpler aspects of the sciences involved.** A liberal attitude toward disclosing classified information would be needed in order that these scientists may be able to make a contribution. Real contributions can hardly be expected if they are allowed to work in a vacuum. I would, however, make a general observation: in my opinion, it is doubtful if any outstanding scientist, without a long period of study and training in cryptanalysis, could make a real contribution in either the cryptographic or the cryptanalytic field. If he is outstanding, the chances are that he is past 50 years of age, in which case his capacity to learn a new field is somewhat more limited than in the case of a young man of 25. There are, no doubt, problems of a mathematical, electrical, or chemical nature which might not involve a thorough grounding in cryptologic theory and techniques and which could, therefore, be handled by outstanding scientists on a fee or consultant basis. However, I would like to add another comment of a general nature on this point. It is that an uninformed person who might read the staff study might conclude that the achievements of the ASA in research and development in the cryptologic

*The universities chosen could well be those that are selected to carry out the ASA ROTC program for simplicity in coordination and supervision.

**Procedures might be evolved which would permit eventual commissioning in the ASA Reserve for those especially valuable to the Agency. In these cases, physical and military requirements would necessarily have to be waived.

field during the past few years leave much to be desired. This, I am sure, is not what the staff study intends to convey, but it would possibly have been well to have noted in the study that the achievements of the ASA are unmatched by those of the German, Japanese, or Italian organizations and compare very favorably with those of the British and our own Navy organizations. There are, among our ASA personnel, people who are the peers of any scientific personnel at the most important commercial or university laboratories in the world, and it is doubtful, in my mind, if the retention of outside scientists as consultants on any of the basic cryptologic aspects and problems of our field or even on some of the special phases of ASA research would produce as good results as would result from making the conditions and terms of employment of our permanent staff as conducive as possible for efficient operations.

[3b(1)] 7. It might be very useful and interesting to try this proposal out. In doing so, we might learn to what an extent the present rules and regulations hamper governmental laboratories engaged in research and development. If this cannot be done, I suggest that we send one or two individuals out on a six months' or a year's study to see how commercial research laboratories are organized and administered and to learn what we can from them.

[3b(2)] 8. I would put my greatest trust in this proposal, which in reality is by no means new. That is how the SIS was built--and under the handicaps of Civil Service regulations. But it is only the first step to select the young graduates. The conditions of employment and the future possibilities the employment holds forth must be such as to be conducive to enthusiastic work, good thinking, freedom from worry and hampering restrictions as to methods and hours of work, arrangements as to office and laboratory space, the obtaining of supplies and equipment, and so on. For inventive genius is rapidly dulled by too many hampering rules and regulations, and the stimulus to invention cannot be turned on and off by the clock. Moreover, there must be some <u>great incentive</u> to research and invention, incentive with a personal touch above and beyond the normal call of duty. The incentive may consist in the possibility of rapid promotion, or public acclaim for high achievements, or profit from the disposal of commercial rights to inventions covered by patents, or special grants in recognition for accomplishments that must remain secret. Where these incentives exist, invention and research progress flourishes; where they do not exist, new ideas are scarce and research stagnates.

[3b(3)] 9. A very good idea, and I think that official leave for this purpose should be granted, and, if possible, with

expenses paid. As an alternative, such personnel might be placed on T/D, which would automatically pay expenses. On the other hand, I think that some dissemination of information on our part, to engineering and technical societies, would be worthwhile. Our present attitude toward this subject of dissemination of information which is that there should be as little as possible and that we should erect a very tight fence around the knowledge we now possess, is bound to have a detrimental effect in the long run. In the final analysis, it may be that Egyptian civilization disappeared because the priesthood made the art of writing a deep secret--because it might become a dangerous tool in the hands of the people in general. My own feeling is that it would do no harm and a lot of good if we cooperated with certain universities and colleges, to help them give courses in cryptology, and to coordinate this with the ASA ROTC program. In the long run the Government would be the gainer, not the loser.

[3b(4)] 10. An excellent proposal. Let us try this out as soon as possible, to see how far travel funds and allowances for this purpose will be authorized. Such funds, in peace time, are very difficult to obtain, but I feel sure that as much of long-term value would accrue that we ought to foster this by all means. Incidentally, the staff study does not say anything about keeping in close touch with research work in other Army and U.S. laboratories, or with the research and development programs being established within the War Department. I think this is also very important, in order to keep abreast of what is going on within our own Government agencies. Our people ought to "mix" more with other scientists in governmental and commercial laboratories. It is realized that certain aspects of our work must be kept secret and this is right and proper. But it also restricts our people a good deal in their every day contacts and life. Perhaps we have been a bit too secretive--on the theory that we must keep all cryptanalytic information secret. Perhaps this theory is wrong and perhaps we should foster the kind of social "mixing" that takes place among the scientific personnel of other governmental agencies.

WILLIAM F. FRIEDMAN
Director of
Communications Research

SPSEO Subject: Signal Security Agency - Procurement Authority.

THRU Chief, Army Comm Serv FROM Assistant Chief Signal Officer DATE 1 Oct 1945 COMMENT NO. 3

TO Chief, Procurement & Distribution Service
Attn: Chief, Purchases Branch

With reference to paragraph 3 of Comment No. 1, the Chief Signal Officer has approved the following procedure:

The procurement authority of the Chief Signal Officer delegated to the Chief, Signal Security Agency, by Signal Corps Procurement Instructions 3-1-9 (a) (13) as revised 1 September 1945 will be continued in force until such time as determination is reached concerning the specific responsibilities of the Army Security Agency and the Chief Signal Officer.

BY ORDER OF THE CHIEF SIGNAL OFFICER:

/s/
James A. Code, Jr., Maj. Gen. USA
Assistant Chief Signal Officer

1 Incl n/c

COPY

SIGRP-4-4 (4 April 1946) 2nd Ind

HD, OCSigO, Washington 25, D. C., 28 June 1946

TO: Chief, Army Security Agency, Washington 25, D. C.

1. Reference is made to telephone conversations between Major J. M. Paulds of your office and Major J. G. Bent, Jr., this office, regarding the Signal Corps performing all procurement operations for the Army Security Agency.

2. There is attached for your information a copy of draft of proposed Transmittal Sheet to Control Division, OCSigO, requesting amendment to OCSigO Memorandum No. 2 and 3. There is also attached draft of proposed directive to Philadelphia Signal Corps Procurement District requesting that the Signal Corps Procurement Instructions (SigCPI 3-1-9) be amended to clearly establish the procurement responsibilities of the Purchases Branch, OCSigO, with respect to the Army Security Agency. These drafts or directives are in accordance with agreement reached over the telephone and it is requested that the formal concurrence of your office be given with reference thereto.

3. It was agreed further that the following would be accomplished with respect to the indicated functions:

a. Housekeeping and Personnel functions. The Army Security Agency will provide the following:

(1) Adequate space
(2) Performance of all necessary housekeeping functions including

(a) Storage and Issue of office supplies and equipment
(b) Furnishing of motor pool service
(c) Security and intelligence
(d) Custodial service

(3) Performance of the following personnel functions:

(a) Issuance of travel orders and preparation of travel vouchers for Civilian personnel that might have to travel
(b) Preparation of civilian personnel payroll
(c) Maintenance of files and records
(d) Civilian personnel recruitment
(e) Civilian personnel classification
(f) Civilian personnel placement other than selection, interview, and specific assignment
(g) Civilian personnel employee relations
(h) Processing of separations for civilian personnel

b. Fiscal Functions.

(1) The Army Security Agency Fiscal Officer shall be designated as the Fiscal Officer with respect to purchases made through the Army Security Agency Purchase Section of the Purchases Branch, OCSigO, both with respect to certification of availability of funds on procurement directives and payment of invoices under contracts issued by the Army Security Agency Purchase Section, Purchases Branch, OCSigO.

(2) The Army Security Agency will make funds available to cover the payroll for civilian personnel assigned to the Army Security Agency Purchase Section, Purchases Branch, OCSigO, for the period 1 July 1946 through 30 September 1946.

(3) On and after 1 October 1946, the Director, Fiscal Division, OCSigO will make funds available to the Fiscal Officer, Army Security Agency to cover the payroll for civilian personnel assigned to Army Security Agency Purchase Section, Purchases Branch, OCSigO.

c. Procurement Directives

(1) Procurement directives shall be processed by the Army Security Agency in accordance with provisions of OCSigO Serial Memorandum No. 20 (1946) as amended, subject: "Supply Control System". Procurement directives shall contain or cite specifications of the articles or services required, and deviations from specifications or proposed substitutions to commercial articles identified in the procurement directive, shall be approved by the Army Security Agency prior to purchase. All procurement directives placed on the Army Security Agency Purchase Section, Purchases Branch, OCSigO shall be signed by the Commanding Officer thereof or his designated representative.

d. Security

(1) Specifications and drawings of a classified nature shall be handled in accordance with AR 380-5.

4. There is quoted below paragraph 3-1-1 from SigCPI which clearly sets forth the overall procurement responsibilities of the Chief Signal Officer and makes specific reference to Army Security Agency items:

"3-1-1 Procurement responsibilities of the Chief Signal Officer:-

The Chief Signal Officer is responsible for the procurement of radio communication and radar equipment; telephone, telegraph, printing telegraph and facsimile equipment; Signal

Corps photographic equipment; meteorological equipment; coding and cipher equipment, including secret inks and associated chemicals; pigeon equipment; experimental research and development equipment; equipment for aircraft communication and navigational purposes; communication equipment for motorized and armored forces; fire control and ground radio communication equipment; parachute and other special designs of communication equipment; and other items of Signal Corps equipment and supplies."

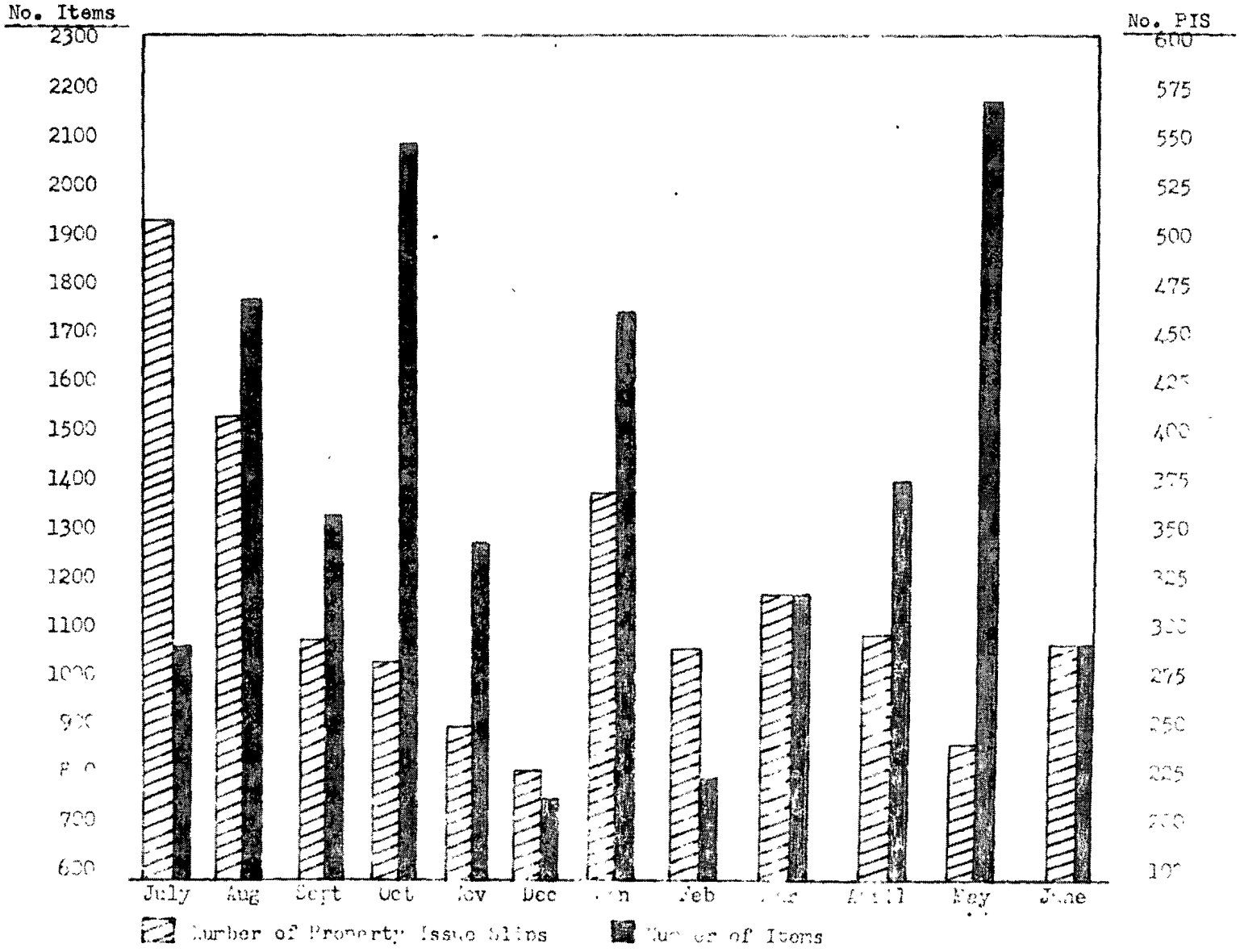
5. It is also requested that the concurrence of the Army Security Agency be granted with respect to the above.

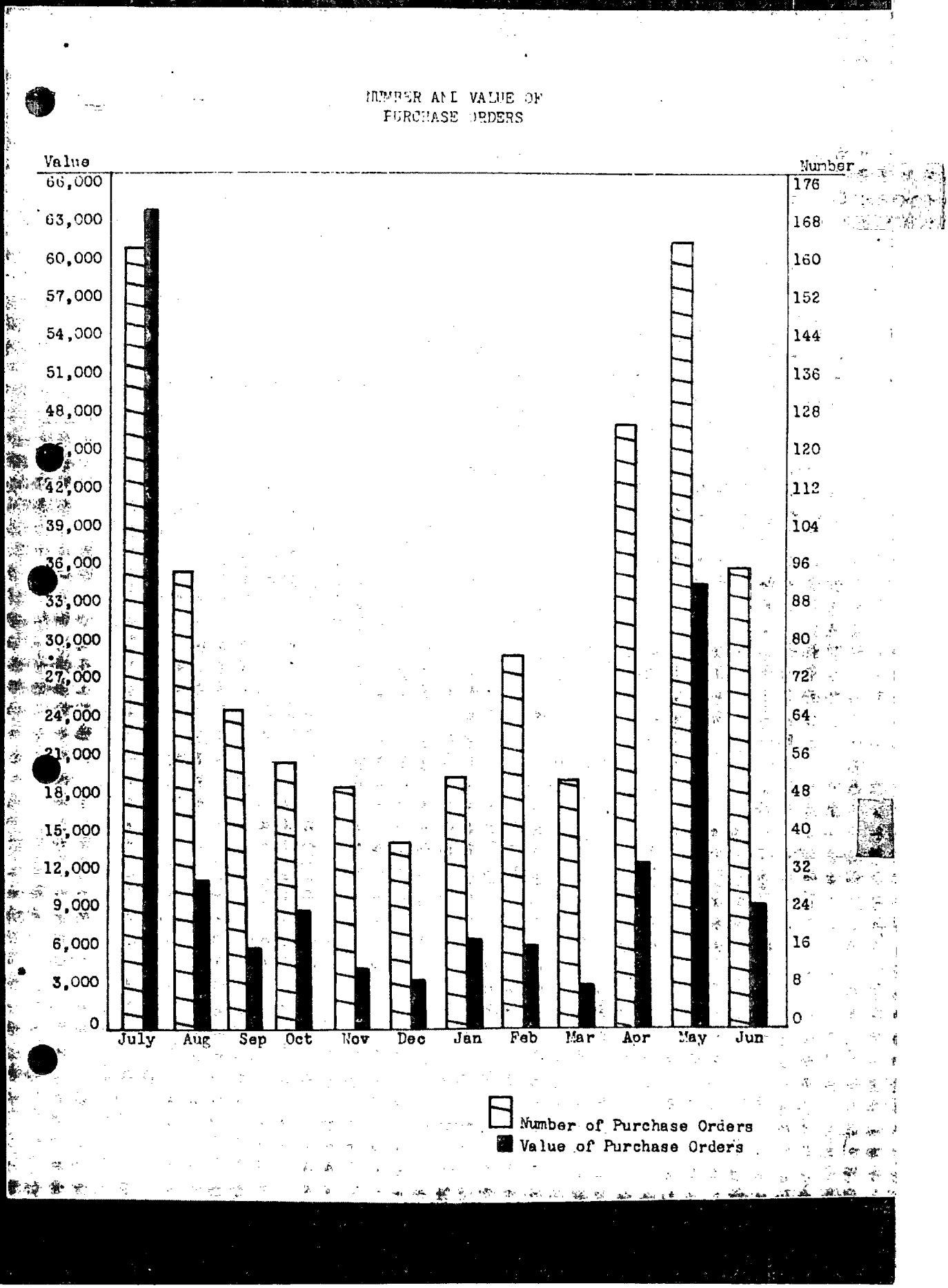
FOR THE CHIEF SIGNAL OFFICER:

2 Incls
1. Draft of T/S to Control Div
2. Draft to PSCPD

EUGENE V. ELDER
Colonel, Signal Corps
Director, Procurement Division

PROPERTY ISSUE SLIPS RECEIVED
AND
NUMBER OF ITEMS




NUMBER AND VALUE OF
PURCHASE ORDERS
Value
Number
66,000
63,000
60,000
57,000
54,000
51,000
48,000
42,000
39,000
36,000
33,000
30,000
27,000
24,000
21,000
18,000
15,000
12,000
9,000
6,000
3,000
0
176
168
160
152
144
136
128
120
112
104
96
88
80
72
64
56
48
40
32
24
16
8
0
July
Aug
Sep
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun
Number of Purchase Orders
Value of Purchase Orders

Doc ID: 6579558

TOP SECRET

STATUS OF CRYPTONETS

World-Wide and Theater Cryptonets

July 1945 Cryptonet		June 1946 Cryptonet
12 Very High Command World-wide SIGABA 13 High Command World-wide SIGABA 14 General World-wide SIGABA 15 World-wide Strip	Superseded By	15 World-wide consisting of very high command, high command, general, and continental U.S. SIGABA systems, and World-wide, continental U.S., and stand-by strip systems.
18 Alaskan Theater 19 African-Middle East Theater 27 Caribbean-South American Theater 31 "Eyes Only" Special Purpose	Eliminated And Needs Incorporated	
22 European Theater 24 Mediterranean Theater 36 European-Mediterranean Radioteletype SIGCUM	Consolidated Into	22 European-wide consisting of high command and general SIGABA, three SIGCUM, and one strip systems.
20 Western Pacific Theater 21 Middle Pacific Theater 23 China-India-Burma Theater 37 Pacific Landline and Radioteletype SIGCUM 39 20th Air Force	Consolidated Into	45 Pacific-wide consisting of high command and general SIGABA, general and back-up strip, high command radioteletype SIGCUM, and landline and radioteletype SIGCUM systems.

TOP SECRET

Special Purpose Cryptonets

July 1948	June 1946
Cryptonet:	
17 Army Airways Communications Service World-wide	Revised to consist of Army the SIGABA and strip systems for Atlantic and Pacific routes and SIGABA, strip, and M-209 systems for domestic and world-wide use
28 SIGSALY Speech Privacy	Continued in use until all SIGSALY equipment withdrawn in Feb. 1946
33 G-2 Special Security	Revised to reduce holders and systems
34 Army Security Agency SIGCUM	Reduced to one Atlantic, one Pacific system
35 ASA World-wide operational	Revised to consist of one high-command and one general world-wide SIGABA, one domestic SIGCUM, and one SIGTOT systems
36 Army Airways Communications Service SIGCUM	Eliminated when use of SIGCUM by AAGS discontinued
40 Joint Army-Navy	Revised to consist of world-wide high command SIGABA, and Atlantic and Pacific strip systems
41 Persian Gulf Command	Discontinued December 1945
42 Military Attache	Revised to consist of SIGTOT, one-time pad, strip, and one SIGABA systems
43 Pacific SIGHUAD Weather Data	Eliminated when "in the clear" traffic authorized
44 White House	Consists of one SIGABA and one SIGTOT systems
89 SIGHUAD modified SIGCUM for Domestic ASA Traffic	Revised to include additional holders and systems
97 Training Cryptonet	Continued
98 Training Cryptonet	Replaced by Cryptonet 97
99 Training Cryptonet	Replaced by Cryptonet 97

Doc ID: 6579558

STATUS OF NON-CRYPTOGRAPHIC SYSTEMS

	July 1945	June 1943
SECCOM Systems:		
265 274	Domestic U. S. TWX and other landlines	Continued
283	Radioteletype [illegible], Middle East and Far East headquarters	Discontinued March 1946
285	Radioteletype [illegible], Atlantic, Caribbean, and South American headquarters	Discontinued March 1946
490	British-U.S. Army landlines	Discontinued January 1946
606	Philippines G-2 Landline	Discontinued September 1945
610	Pacific Aircraft Movement	Discontinued September 1945
SIGABA Systems:		
45	White House Traffic on Automatic ASA	Discontinued October 1946
100		
SIGNAL [illegible]:		
90	Local G-2, Navy Intelligence, ASA	Continued
225 478 617	Caribbean Weather Traffic	Discontinued August 1945
612 613 616	Naval Control Traffic in Pacific	Discontinued October 1945
609	Washington Army-Navy Weather Traffic	Discontinued August 1945
M-209 Systems:		
630	Limited Combined 7th AACS Wing Pacific Aircraft Movement	Discontinued March 1946
631	Outlying Alaskan AACS Wing Stations	Replaced by Cryptonet 17 January 1943

Strip Systems:	July 1946	June 1946
452	Western Defense Command Mexican Traffic	Discontinued October 1946
453	WAR-Moscow Pick-up	Replaced by Fade
454	[illegible] Canadian traffic	Discontinued October 1946
455	Liberian Traffic	Discontinued October 1946
456	Brussels-[illegible]-TO Shuttle Bombing	Discontinued July 1946
457	ATC North African Escaped POW Traffic	Discontinued September 1946
458	[illegible]O Psychological Warfare Traffic	Discontinued December 1945
460	Canadian Limited Combined Traffic	Discontinued October 1946
465	[illegible]O French Traffic	Discontinued December 1945
FX Codes:	Pacific and Alaska Rapid Aircraft Movement Traffic	Discontinued
[illegible]	Pacific-Alaska-West Coast Anti-Japanese Balloon Traffic	Discontinued

SIGNAL Systems:

Used extensively as primary means of transmitting high level SECRET traffic between WAR and all theater headquarters, both overseas depot unit and base commands, and major POE's and special missions. Systems also widely used for point-to-point communication between major service, ground, and air force headquarters of ETO, MTO, CBA, and POA, and smaller theaters. Both Air Force used systems for most of point-to-point traffic with WAR and its subordinate units in the Pacific.	Continued for most of high level point-to-point traffic - authorized for all classifications August 1946.

Doc ID: 6579558

STATUS OF COMBINED [illegible] SYSTEMS

July 1945

Cipher Machine Systems: CCDP 0101 General World-wide
CCBP 0102 High Command Worldwide
CCDP 0132 Very High Command World-wide
CCBP 0105 Pacific Area General
CCBP 0133 Pacific Area High Command
CCBP 0131 ETO-MTO-Atlantic Area General

CCBP 0121, 0129 Combined Field Code
CCBP 0122 Point-to-Point authentication System
CCBP 0127, 0128 Air-to-ground authentication Code
CCBP 0124, 0125 0126 Strip back-up to Cipher Machine System
CCDP 0130 Combined Assault Code

System 810 Limited Combined European Army System

January 1946

Cipher Machine System: CCDP 0201 World-wide General
CCBP 0202 World-wide High Command
CCBP 0203 World-wide Very High Command

System 820 Limited Combined Intelligence Data

June 1946:

Cipher Machine System: CCBP 0202 World-wide High Command

System 820 Limited Combined Intelligence Data

RETURNED MATERIEL

1945	Machines	Devices	Documents	Pounds
July	381	50	123	
August	293	610	324	
September	388	496	26	
October	785	766		
November	458	944		
December	625	1468	29	
1946				
January	536	2263	181	
February	596	1430	10	
March	557	815	13	
April	209	1665	191	
May	260	597	1	
June	27	339		
TOTAL	5115	11,443	898	

ID: 6579558

ACCOUNTING STATISTICS

1945	Total Active Accounts	Cumulative Total Semi-Annual Reports Submitted	Cumulative Total Semi-Annual Reports Completed	Total Other Than Semi-Annual Reports Submitted	Total Files Screened
July	2,135	616	252	13,493	
August	1,599	595	658	14,359	
September	1,270	911	775	8,422	
October	752	935	865	6,153	144
November	952	938	857	7,810	661
December	992	938	893	4,221	775
1946					
January	[illegible]	461	176	5,395	172
February	704	478	321	4,369	105
March	521	465	413	4,160	135
April	521	521	463	4,210	165
May	515	571	[illegible]	3,[illegible]	265
June	514	514	405	4,[illegible]	243

Doc ID: 6579558

DOCUMENTARY MATERIEL PRODUCTION

	Cryptographic			Non-cryptographic		
	Jobs	Documents	Pages	Jobs	Documents	Pages
1945						
July	898	272,31[illegible]	4,745,39[illegible]	13[illegible]	129,367	4,218,977
August	1,[illegible]11	314,736	5,598,7[illegible]4	71	15,885	427,552
September	588	147,[illegible]4[illegible]	1,449,[illegible]27	34	6,633	353,114
October	343	168,485	564,196	35	34,258	3[illegible],136
November	2[illegible]6	5[illegible],737	456,1[illegible]6	191	131,29[illegible]	2[illegible],6[illegible]9
December	149	12,653	63,[illegible]94	18	16,246	36,755
1946						
January	[illegible]63	[illegible],288	120,[illegible]38	87	396,419	4[illegible],[illegible]6[illegible]
February	4[illegible]2	[illegible]6,637	141,[illegible]97	1[illegible]4	74,909	114,732
March	538	1[illegible],471	1[illegible],532	25	20,746	163,57[illegible]
April	436	3[illegible],549	213,[illegible]83	34	1,136,335	1,2[illegible],[illegible]44
May	4[illegible]2	31,[illegible]61	1[illegible],767	47	3[illegible],646	1,[illegible],[illegible]72
June	6[illegible]1	23,161	16[illegible],545	4[illegible]	29,473	179,441

ID: 6579558

MATERIEL DISTRIBUTION

July 1945 - June 1946

1945	Machines	Devices	Rotor Sets	Systems Editions	Packages	Pouches	Crates	Ton Weight
July	185	165	1480	723	8985	4564	798	100
August	151	43	975	476	8625	5235	416	18
September	28	18	504	189	5410	3084	33	18
October	125	10	875	203	4870	1851	11	8
November	571	2	308	183	5121	2108	9	8½
December	16	9	736	71	2495	814	10	3
1946								
January	256	211	748	240	3364	1277	4	9
February	10	9	1383	134	3140	1546	11	4
March	25	4	428	119	2565	876	16	2½
April	101	55	491	111	2658	921	68	2
May	9	51	182	156	2629	765	17	11½
June	34	47	139	153	2510	985	8	3½
TOTAL	1511	624	8209	2758	52,372	24,024	1401	188

MACHINE COMPONENT MATERIEL PRODUCTION

1945	SIGTOT Tapes	M-209 Keys	Rotor Sets
July	17,873	17,840	2,022
August	12,735	13,364	1,902
September	2,625	3,730	1,736
October	4,600	2,036	505
November	3,075	1,502	343
December	866	1,400	270
1946			
January	1,367	1,270	386
February	1,091	1,143	237
March	882	2,032	176
April	794	2,031	164
May	1,008	2,208	184
June	1,062	1,811	209

~~SECRET~~

HEADQUARTERS
ARMY SECURITY AGENCY
Washington 25, D.C.

~~SECRET~~
By authority of the
Commanding General
Initials Date

AGAS-23

29 December 1945

SUBJECT: Changes to Standing Operating Procedure-Organization, 12 December 1945

TO: Assistant Chief, Operations

1. The change in organization outlined in attached letter dated 12 December 1945 from Chief, Methods Branch and Chief, Protective Branch to Chief, Security Division, subject: "Transmission Section", necessitates certain changes to "Functions and Responsibilities of the Security Division" in Standing Operating Procedure-Organization, 12 December 1945. The "master copy" of the manual held by this office has been changed as follows:

a. Paragraph 1.c.(2) to read "Recommends new policy and executes established policy for communications security against all forms of cryptanalysis by the enemy".

b. Paragraph 1.c.(4) to read "Prepares security monitoring assignments for the purpose of making cryptographic security studies and coordinates these requirements with Protective Branch".

c. Paragraph 1.d.(6) has been added, to read "Recommends new policy and executes established policy for communications security against all forms of traffic analysis by the enemy".

d. Paragraph 1.d.(7) has been added, to read "Prepares communications security monitoring assignments and coordinates these requirements with Intercept Control Branch".

2. The changes as outlined above will be reflected in a future publication of Standing Operating Procedure-Organization.

s/ George A. Bicher
t/GEORGE A. BICHER
Colonel, Signal Corps
Assistant Chief, Staff

1 Incl
Ltr dtd 12 Dec 45,
subj: "Transmission Section" from Ch, Methods Branch and Ch, Protective Branch

~~SECRET~~

C
O
P
Y

WDGAS-83

12 December 1945

SUBJECT: Transmission Section

TO: Chief, Security Division

1. It is recommended that the functions of Transmission Section be transferred from Methods Branch to Protective Branch for the following reasons:

a. The functions of Transmission Section and Protective Branch are so closely allied that separate functioning would inevitably result in much duplication of effort.

b. There is at present no personnel in Transmission Section. Steps have been taken to hire one civilian, who could be used just as well in Protective Branch.

c. It is expected that Captain Barton will be assigned to Security Division about the first of the year. If assigned to Methods Branch, as originally proposed, he would have no personnel, except one civilian referred to in "b" above, to work on transmission security problems. If assigned to Protective Branch, he would have thirty trained personnel, who could be employed on both protective and procedural problems. No other replacement for Lt. Landry, who will soon be eligible for discharge, is now in sight.

L. M. MYERS
Lt. Colonel, Signal Corps
Chief, Methods Branch

HAROLD K. LANDRY
1st Lt., Signal Corps
Chief, Protective Branch

COVERAGE ON WAR CIRCUITS - 1 FEBRUARY 1946 THROUGH 16 JUNE 1946

Circuits Covered: 1 February 1946 through 1 May 1946 coverage was of the random type. No regular mission on certain circuits was in effect. During this period violations of transmission security were uncovered as follows:

Station Offending	Operational Violations	Filing Violations	Total
DHAA (Berlin)	155	1022	1177
JCYO (Asmara)	124	66	190
JDJD (Algiers)	145	8	153
JJJJ (Caserta)	64	219	283
RS (Guam Relay)	14	84	98
WAR (Washington)	41	41	82
WLGO (Orly Field)	91	38	129
WSY (Sayville, N.Y.)	74	--	74
WTA (ZU Relay Manila)	5	5	10
WVH (Quarry Heights)	5	33	38
WZT (Bermuda)	9	31	40
WZT/2 (Bermuda)	5	--	5
WZQ (Borinquen Field)	1	7	8
WYKN (Stephanville)	11	--	11
WYSZ (Santa Maria)	49	112	161
WYRR (Natal)	14	16	30
WYQY (Azores)	5	--	5
WYQI (Morocco)	20	--	20
WXME (Weather Ship)	13	10	23
WXIA (Washington)	16	--	18
Miscellaneous	--	601	601
	863	2293	3156

1 May 1946 through 16 May 1946: Regular coverage given to DHAA, JCYO, JCYN, and WLGO transmitting to WAR. In addition some spot coverage was given WAR and WYTE. Tabulations resulting from this mission are as follows:

Station Offending	Operational Violations	Filing Violations	Total
DHAA (Berlin)	208	1180	1388
JCYO (Asmara)	310	149	459
JCYN (Cairo)	4	872	876
WAR (Washington)	14	--	14
WLGO (Orly Field)	7	--	7
WYTE (Trinidad)	6	18	24
Miscellaneous	--	276	276
	549	2475	3024

16 May 1946 through 15 June 1946: Regular coverage was given the Caribbean stations WVH, WVL, and WYTE transmitting to WAR, and WAR transmitting to them. Some spot coverage also received on DHAA and JCYO. Tabulations made from this study show the following results:

Offending Station	Operational Violations	Filing Violations	Total
DHAA (Berlin)	11	66	77
JCYO (Asmara)	17	39	56
WAR (Washington)	823	358	1181
WVL (Quarry Heights)	678	1831	2509
WVH (San Juan)	968	4214	5182
WYTE (Trinidad)	150	222	372
Miscellaneous	--	833	833
	2647	7363	10010
GRAND TOTAL			16190

16 June 1946 through end of Fiscal year coverage was given on DHAA, JJJJ, and JCYO. Results of this study will be included in report for the next fiscal year.

Notifications sent:

1 February 1946 through 1 May 1946 notifications of Violations of Transmission Security were sent to the following headquarters showing the violations listed under circuits covered for this period:

Headquarters Army Air Forces
Headquarters United States Army Forces, Pacific
Headquarters Caribbean Defense Command
Headquarters United States Forces, Europe
Headquarters United States Army Forces, African Middle Eastern Theater
War Department Signal Center, Washington, D. C.
Headquarters Mediterranean Theater

1 May 1946 through 15 May 1946: Violation reports were prepared for this period covering a total of over 5000 violations of transmission security committed largely in the European theater. However, due to difficulties encountered in clarifying the policy governing the correct procedure to be employed in sending notifications to offending units these notifications were never sent out. As a result it was not possible to make comparative studies of these circuits at a later date.

16 May 1946 through 15 June 1946:

Headquarters Panama Canal Department
Headquarters Trinidad Base Command
Headquarters Army Air Forces
War Department Signal Center, Washington
Headquarters Antilles Department

16 June 1946 through end of Fiscal year: Reports covering this period will be forwarded during the next fiscal year.

Special violation notifications sent out. One security violation involving the transmission of classified information in the clear was sent to the Radio Corporation of America. This violation was committed on its commercial circuit between Tangiers and New York.

ULTRA TOP SECRET

HEADQUARTERS
ARMY SECURITY AGENCY
Washington 25, D.C.

WDCSS-31 13 October 1945

SUBJECT: Use of Strong Cryptographic Principles in Low-Echelon Devices*

DISCUSSION:

1. The need for a policy with respect to the use of cryptographic principles. Recently the Army Ground Forces and Army Air Forces have requested the development of certain new cryptographic devices. The general intent of the proposed military characteristics is to provide low-echelon cryptographic devices which possess more security and speed of operation than are presently available. The first step in the development of a device is the selection of a cryptographic principle which is not only adaptable to the desired operational characteristics, but which will also provide the desired security.

2. Minimum security requirements. There has been a tendency to regard time of action in low echelons as being short and therefore not requiring much security. However, time of action is actually variable depending upon the situation at a particular time. In some cases low-level intelligence giving the order of battle and personalities is valuable for quite some time. Although the exact number of the size of plant and number of personnel which can be devoted to obtaining low-level signal intelligence, we have found that low-echelon communication is one of the more profitable sources of intelligence and has directed his main effort against it. (Tabs A, B). This condition is expected to become more pronounced hereafter, while in the future, medium and high-level intelligence will be produced by devices with very high security.

3. Present equipment. The device currently used by low-echelons of the Ground Forces is the Converter M-209. The main objections to the Converter M-209 are its slow speed and its failure to provide adequate security under operational abuse. The consequence is that too many urgent messages are sent in the clear and, when time is taken to use the device, carelessness or lack of training on the part of the operator drastically reduces the amount of security which the device is capable of providing. (Tabs C, D).

---

*For purposes of this paper, a low-echelon device is considered as one which is classified no higher than secret, is not registered, is used by units below division, does not require cryptographic clearance for operating personnel, and will occasionally suffer physical compromise.

~~USSR FOR SECRET~~

WDSS-81 (15 October 1945)

4. Possible solutions to problem. Low-echelon security might be obtained in one of three ways:

a. Provide systems which are operationally foolproof. The way to do this is unknown in the present state of the art.

b. Use the Converter M-209 or equivalent system, and provide a very extensive program of training and monitoring. An Army Security Agency Officer, upon returning from temporary duty in the European Theater of Operations, stated in his report that the theater was very short of trained Converter M-209 operator personnel and as a result a considerable number of serious violations of security were being detected. Casualties among Converter M-209 personnel were very high, trained reinforcements were not available, and, as a result, riflemen were generally used as replacements. An attempt was being made to start a theater school for the training of operators.

c. Provide systems which will afford adequate security in spite of a normal amount of low-echelon abuse. At the present time the only practical way to provide high speed and afford adequate security in spite of low-echelon operational abuse is to use a rotor system. The fact that a portable rotor device can be made has been demonstrated in the Converter M-325. However, at the present time all rotor devices are classified as CONFIDENTIAL and are registered; consequently, such devices can be used only in compliance with strict physical safeguarding requirements. For an example of the physical safeguarding requirements for the Converter M-134-C (SIGABA) see Tab A.

5. Using a rotor device in low echelons has certain disadvantages. It is a fundamental principle of cryptographic design to provide devices which assure adequate security to our own communications regardless of the fact that the enemy may have captured one of the devices, provided he does not possess the specific key used in operation of the devices. Nevertheless, rotor devices have been registered and classified as CONFIDENTIAL primarily to prevent the enemy from compromising and/or penetrating them. A certain amount of risk is involved in the capture of certain rotor devices. The enemy, upon capturing such a device, may consider it to be a better one than his own and adopt it for his own use. This, in turn, might reduce the amount of intelligence which otherwise we would be able to obtain from the enemy's communications.

6. Security vs. Intelligence. Since the solution proposed in paragraph 4c above is highly desirable but has the disadvantage discussed in

paragraph 5, the question to be resolved is this: Which is more advisable, to protect our own communications to the greatest possible degree with a potential saving of lives of our own men, or to place reliance on saving lives by a knowledge of what the enemy is doing or going to do, gained as a result of our cryptanalytic work?

a. There does not appear to be any established doctrine which answers this question directly. Paragraph 288 of FM 100-5 states that "Secrecy in the transmission of messages is of the utmost importance..." On the other hand paragraph 186 of FM 100-5 says that ". . . military intelligence* is . . . . an essential factor in the estimate of the situation and in the conduct of operations." One could embark upon a legalistic argument with respect to the relative supremacy of the words "utmost" and"essential" but such a discussion would undoubtedly result in stretching the interpretation beyond the original intent of the above-mentioned paragraphs.

b. To complicate matters further both of the above statements are qualified by other doctrine. Paragraph 810a of FM 101-10, in discussing the relation of security to other signal communication requirements states that "The conflicting requirements of speed and security vary according to circumstances. Staff officers and signal communication personnel must be guided by general principles, applied with full appreciation of existing circumstances, rather than by rigid regulations. Reasonable security at all times should be the goal. In general, in a strategic situation some speed may be sacrificed to meet the greater secrecy requirements, while in tactical situations secrecy is often of secondary importance and may be sacrificed to meet the greater speed requirements. . . ." The "essentialness" of military intelligence on the other hand is qualified by paragraph 131 of FM 100-5 which says in part that "In campaign exact information concerning the enemy can seldom be obtained. To delay action in an emergency because of i complete information shows a lack of energetic leadership and may result in lost opportunities. A commander must take calculated risks."

c. The basic doctrines set forth above, by treating signal security and signal intelligence as separate subjects, overlook their technical interdependency. The course taken by enemy signal intelligence depends upon the pattern of friendly signal security activity, whereas friendly signal intelligence strives to combat enemy signal security measures. In a general sense, therefore, signal security consistently seeks to destroy an equilibrium which signal intelligence persistently strives to maintain. (See Tab F). Thus, from technical considerations alone, signal security has the greater opportunity to assume the initiative.

---

*Military intelligence includes signal intelligence as a source of information

d. Since offensive action is a fundamental doctrine of U.S. military operations and signal security is recognized as an essential element of offensive action, (See Tab G), we should always take the initiative to improve signal security wherever possible. Continuous technological advancement in cryptography and cryptanalysis must be sought and expected. (See Tab F). It behooves the cryptanalyst to gear his activity not only to the solution of enemy cryptography but also to the solution of friendly cryptography.

e. The decision to take the initiative with signal security is substantiated further by the following observations which also indicate the futility of carrying physical safeguarding measures to the extreme:

(1) We can never be sure that we know just what technological advances the enemy may make in his own cryptography which might dry up sources of signal intelligence. It must be expected that the enemy will make such improvements through his own initiative regardless of what forms of cryptography we choose to use in lor echelons.

(2) Neither can we be sure, regardless of the physical safe-guarding precautions we take, that the enemy will be unable to determine, by means other than capture, the basic principles employed in our devices.

f. In summary, it can be said that although the end results of signal security and signal intelligence may be construed to be equally important, signal intelligence activity is contingent upon or conditioned by signal security activity. Since offensive action is a basic doctrine of U. S. military operations, signal security activity, as an element of offensive action, must always assume the initiative and signal intelligence activity must keep abreast of both the foreign and friendly situations as best it can.

7. CONCLUSIONS

A need for more security in low-echelon signal communications exists. Provision of additional security may require the utilization of cryptographic principles which, through capture, may assist the enemy in improving the security of his own communications. However, technological advancements in enemy cryptography are inevitable, since the cryptologic art is not static and cryptographic devices which are presently considered to be high security devices may become medium or low security devices within a few years and obsolete thereafter. Technological advances in enemy

cryptanalysis must be offset by assuming the initiative with friendly signal security measures. Therefore, in designing cryptographic devices for low-echelon use by the Army, cryptographic principles should be selected which will not become obsolete before a fair and economical period of use has been obtained. This may require the use of principles which may not previously have been known to the enemy.

RECOMMENDATIONS:

It is recommended that, in low-echelon cryptographic devices, it be a policy of the War Department to utilize cryptographic principles which will provide adequate security consistent with operational requirements regardless of the fact that such principles may not previously have been known to the enemy.

~~TOP SECRET ULTRA~~

Summary of "I" Operational Order "B" #21.

1. The Commander of the Nampogun TOKUSHU JOHOBU (Special Intelligence Bureau) will, in matters pertaining to the technical aspects of cryptanalysis and signal intelligence, assume supervision over the 2nd [illegible] TOKUSHU JOHOBU, the 14th GUN SHIREIBU TOKUSHU JOHOHAN (Special Intelligence Section) and the 4th KOKU TOKUSHU TSUSHINTAI (Air Special Communications Unit). He will cooperate closely with the CHUO TOKUSHU JOHOBU (Central Special Intelligence Bureau) and the Navy TOKUSHU JOHO KIKAN (Special Intelligence Agency) in this area and will immediately speed up the gathering together of information derived from cryptanalytic and signal intelligence sources in the Pacific Theater. We are having the Army Chief of Staff instruct him on the details.

2. The 2nd HOMENGUN SHIREIKAN (as well as the 14th GUN SHIREIKAN and the 4th KOKUGUN SHIREIKAN) will have their various subordinate TOKUSHU JOHOBU ("TOKUSHU JOHOHAN or KOKU TOKUSHU TSUSHINTAI as the case may be) cooperate with the above-mentioned NANPOGUN TOKUSHU JOHOBUCHO in his work with signal intelligence and cryptanalysis and will have them be supervised by him in technical matters concerning these.

Instructions from the Army Chief of Staff pursuant to "I" Operations order "B" #21, paragraph 1:

1. In connection with the compilation of information on the Pacific Theater, place the emphasis on the United States Air Forces and Task Forces. By current study of United States military communications, determine the movements they are planning. At the same time, with respect to cryptanalysis, the NANPOGUN will devote its energies entirely to the United States Air Force and will strive to give the information acquired thereby as wide an application as possible.

Message addressed to: NAGAYAKI
DAIHONEI

For reference of: CHUO TOKUSHU JOHOBU SHIREIKAN
(Head of the Central Special Intelligence Bureau)

TOP SECRET ULTRA

From: Helsinki
To: Tokyo
June 17, 1943
JAP

#229

It is advisable for Japan to work on the codes of the small nations which do not employ such difficult systems because they supply important information on the United States and Great Britain. The breaking of Turkish ciphers and others has been extremely valuable along these lines. It is now very hard to read American and British diplomatic systems and we must get intelligence from these other sources.

Japan's war aims should be very carefully guarded. We can help do this by strengthening our surveillance of the deciphering of the traffic from China, the South Seas, and Manchuria.

NOTE: This is a paraphrase of a British translation.
American translation to follow in few days.

Intr. ?
Rec'd. ?
Trans. 7-2-43 (J45-g)

C 126

Tab B

TOP SECRET ULTRA

~~TOP SECRET ULTRA~~

Brief Resume of Enemy Exploitation of
Converter M-209
(Extracted from Current "I" Reports)

Japanese

The Japanese, through studying the system and through exchange information with Sweden and Germany, seem to have complete knowledge of the working principle and the indicator system of the Converter M-209. (17 December 1943, C-289; 16 April 1944 C-949-A; 10 June 1944, C-758; 20 June 1944, C-855; 31 July 1944, C-641-A-F; 16 June 1944, C-877.) This knowledge, briefly, consists of the following:

Machine: complete description as to size, etc;
-that it is like the Swedish machine;
-that it is an additive machine and is reciprocal and has a comparatively long cycle.

Indicator system:-indicator consists of ten letters:
-the first two used as a pair;
-which letters of the alphabet may be used for each position for the middle six letters;
-the last two (9th and 10th) used approximately a week to ten days.

They now refer to the M-209 as the Z Code and have requested all available traffic in the system. They state that they have made progress in the solution of the Z Code (6 October, 1944, C-1005 and 16 October 1944, C-1001-A-B-G), and that they have a report of the reconstruction and decipherment of the Z Code, copies of which were sent to Colonel [illegible] 22 November 1944 (30 November 1944, J-49391 and 30 November 1944, C-1006).

There is a strong possibility that the Japanese broke messages (presumably enciphered in M-209) sent from Kunming by the 20th BOMCOM, but this has not definitely been proved. (2 December 1944, DG 427 and 5 January 1945, DG 549).

German

Most of our information of German exploitation of the M-209 has been obtained through interrogation of P/W's. (ER-38820-IN-7, Special IPW Report ER-47478, and "C" & "I" Interrogation). There is evidence of the capture of an M-209 in North Africa which was used to decrypt traffic, and there was mention of a "system" of which the Germans have a copy photostated through a "treasonable act". P/W stated that there are two breaks into our M-209 traffic; physical compromise of key lists and messages in [redacted] He stated that two days were required to read messages and to

PL 86-36/50 USC 3605
EO 3.3(h)(2)

~~TOP SECRET ULTRA~~

TAB C.

obtain the relative internal key, and that other messages sent in the same cryptographic period took about one week to read. It may be said, therefore, that traffic in the M-209 is being read because of "unreported physical compromise of key lists" and/or because of errors in the cryptographic process. There is specific mention of the reuse of an M-209 key of 7 August on 16 October 1944 (18 January 1945, IS-20910). Specific references to levels where M-209 is used are: 13 May 1944, C-925--used by U.S. Air Forces; 8 June 1944, C-948--air and ground bases throughout the Far East; March 1944, Notes to Colonel O'Connor--used for both target demands and bomb lines; 2 December 1944, DC 427--intercepts of daily aircraft station reports.

Tab D

2 March 1945	Tells of change in AM code on 24 February. Lists plain text ascertained to date. (Parts not available yet).
4 March 1945 J-35865-A-B,E. Pinrang to Saigon	Japs state that they have determined the number of airplanes reinforcing the Philippine sector during February by the number of reports on sending formations of military planes to the front and to the rear. Types and numbers of planes on Leyte, Luzon, and Mindoro, are listed.
5 March 1945 J-37295-C. Pinrang to Baguio	3-letter code groups and plain-text equivalents are given for the new change in AIRCO.
6 March 1945 C-983-A-B,D-F,H-L,O,P R,S.	3-letter code groups and plain-text equivalents are given for 26 February change in AIRCO. Describes the conversion table used.
11 March 1945 J-39377-A-J. Pinrang to Saigon	Gives arrival and departure figures, from and to the front and rear, for each of the following fields: Lingayen, Clark, Subic, Mindoro, Leyte, Samar, Halmahera, WUQG, WUQF, Morotai, Sansapor, Biak, Angaur, Peleliu, Hollandia. (For the 9th of March).
14 March 1945 J-39525-A-1. Pinrang to Tokyo	Gives arrival and departure figures, from and to the front and rear, for each of the following places: Lingayen, Clark, Subic, Mindoro, Leyte, Samar, Manila, WUQG, WUQF, Morotai, Sansapor, Biak, Angaur, Peleliu, Hollandia. (For the 12th of March).
15 March 1945 J-393560-A-J. Pinrang to Singapore	Gives arrival and departure figures, from and to the front and rear, for each of the following places: Lingayon, Clark, Subic, Mindoro, Leyte, Samar, Manila, WUQG, WUQF, Morotai, Sansapor, Biak, Angaur, Peleliu, (For the 13th of March.)
24 March 1945 J-40574-A-D,F-K. Pinrang to Surabaya	Gives arrival and departure figures, from and to the front and rear, for each of the following places: Lingayen, Clark, Subic, Mindoro, Leyte, Morotai, Sansapor, Biak, Angaur, Peleliu, Hollandia, Palawan, WUQF, WUQI. (For the 21st of March.)

Tab D

SPECIAL SAFEGUARDING REQUIREMENTS FOR THE CONVERTER M-134-C

1. The joint Army-Navy policy concerning the distribution and the disclosure of the cryptographic design of the SCM M-134-C, promulgated 26 June 1942 is as follows:

"It is mutually agreed that the SCM-M134C will not be placed ashore in foreign territory except at such places where armed personnel of U. S. forces are stationed in sufficient numbers to properly safeguard the physical security of the machine.

"The Army or Navy may make the machine available to the Allies of the United States if the machine is accompanied by a Liaison Officer and Communication Group. It will be the duty of the Liaison Officer to prevent the viewing of the machine or its operation or associated equipment by other than authorized personnel of U. S. armed forces.

"The U. S. Army and Navy mutually agree that they will regard as secret information to be divulged only to the armed forces of the U. S. or to any U. S. citizen required to possess this information in the interests of the United States, any details concerning the SCM-M134C including rotors, wiring diagrams, keys, keying instructions and operating instructions.

"If at any time either the Army or the Navy considers it necessary to deviate in any way from this policy, the one shall fully inform the other of the facts and circumstances and the change in policy, if any, shall be by joint agreement."

/s/ Frank W. Bullock
Frank W. Bullock
Colonel, Signal Corps

/s/ Joseph R. Redman
Captain, U. S. N.
Director Naval Communications

2. Later developments and the increased use of the Converter M-134-C resulted in several, more inclusive statements of this fundamental policy in regard to the use of the converter by the U. S. Army. As a result of the cessation of hostilities in Europe, it was anticipated that there would be an increase in the number of requests for authorization to employ the M-134-C for handling classified communications of U. S. Army units in Allied and neutral nations, in liberated and occupied countries, and in U. S. territories and possessions overseas. In order to clarify War Department policy in this respect, and to insure that the Converter M-134-C would be afforded the maximum degree of physical safeguarding commensurate with such varied operating conditions, the following letter was published by The Adjutant General, 17 June 1945:

TAB E

"2. It is the policy of the War Department that the Converter M-134-C (short title: SIGBA) will not be placed ashore in territories outside the continental limits of the United States, except at such places where armed personnel of U. S. forces are stationed in sufficient numbers to insure the continued physical security of the convertor, and to effect its immediate and complete destruction in the event of imminent capture or subjection to physical compromise. This policy applies as well to operating and keying instructions, maintenance instructions, rotors, wiring diagrams, and any associated classified material for use with the Converter M-134-C. Provided these minimum physical security safeguards have been adequately effected and are rigidly enforced, the following operational conditions will determine the authority for approving requests for installations and use of the Converter M-134-C in such areas:

"a. In cases involving U. S. Army units engaged in tactical operations in foreign territory, requests for authorization in the installation and use of the converter by such units will be referred for approval to the commander of the highest echelon of U. S. armed forces present during such tactical operations.

"b. In cases involving U. S. Army units in liberated and occupied countries under the control of U. S. armed forces, or in U. S. or Allied territories and possessions within the territorial limits of a theater or area of operations, department or defense command, requests for the issuance of the converter to such units will be forwarded through the military channels for approval by the U. S. commander of the theater, area, department, or defense command concerned.

"c. In cases involving U. S. Army units in neutral nations, in liberated or occupied countries not under the control of U. S. armed forces, or in Allied nations not within the territorial limits of a theater or area of operations, department or defense command, requests for the issuance of the converter to such units will be submitted through military channels for approval by the War Department.

"d. In all cases, units requesting approval for the use of the convertor under any of the above operating conditions will inform the approving authority as to the volume, nature, and scope of the unit's communication requirements, the number and type of U. S. troops stationed at the proposed installation to insure its continued physical security, and the measures and means to be employed to effect its immediate and complete destruction in an emergency.

"e. In all cases in which approval has been granted by the appropriate authority for use of the converter by U. S. Army units operating under any of the above conditions, commanders of such units will be responsible for informing the approving authority of any change in status of the items cited in preceding paragraph which would remove the military necessity for continued use of the converter or which would jeopardize its physical [illegible] under such operating conditions.

SECRET

"3. The War Department may make the machines available to the Allies of the United States if the machines are accompanied by a Liaison Officer and Communication Group. IT WILL BE THE DUTY OF THE LIAISON OFFICER TO PREVENT THE VIEWING OF THE MACHINES OR THEIR OPERATION OR ASSOCIATED EQUIPMENT BY ANYONE OTHER THAN AUTHORIZED PERSONNEL OF U.S. ARMED FORCES.

"4. All information concerning any details of the Converter M-134-C, including rotors, wiring diagrams, keys, keying instructions, and operating instructions, will be regarded as classified information to be divulged ONLY to properly accredited officers or enlisted personnel of the armed forces of the United States actually engaged in cryptographic work or to specifically authorized U. S. citizens whose cryptographic duties necessitate a knowledge of these details.

"5. Under no circumstances will United States personnel be granted access to these machines unless authorized in accordance with the policy of the War Department governing clearance of cryptographic personnel."

3. The following additional War Department policies have been promulgated in order to insure the physical safeguarding of the Converter M-134-C;

a. Except in the case of nontactical units within the continental United States, Converter M-134-C will always be employed in Chest CH-76, and the converter and associated material will always be housed in Chest CH-76, unless authority to the contrary is obtained from the U. S. commander of the theater, area, department, or defense command concerned.

b. The safe-destroying incendiary M1-A1 will be constantly maintained with every Converter M-134-C held outside the continental United States except in the case of signal centers operated in areas in which the situation renders the possibility of capture extremely remote. In such locations the incendiary unit may be removed provided authorization for removal has been granted by the U. S. commander of the theater, area, department, or defense command concerned.

c. All code rooms in which the converter is installed must be under twenty-four hour armed guard. A twenty-four hour armed guard should be provided for the converter at any time when it is not in a secure permanent or semipermanent code room, even if it is locked in a CH-76 or other type of three-combination safe.

d. When the converter is transported by rail, even though it is transported in a sealed car, a twenty-four hour armed guard will be maintained over the equipment at all times.

e. If the converter is loaded aboard ship, it will be stored on the main deck or above and not in the hold. A twenty-four hour armed guard will be maintained at all times.

f. Unless specific authorization is granted by the War Department, the converter and associated material will not be transported by air over territory not controlled by U. S. Armed forces or over waters from which recovery by a foreign power is possible. Under no circumstances will the converter be operated in aircraft. If the converter is transported by air, it will be constantly under armed guard.

4. The following are pertinent extracts from policies promulgated by the U.S. Navy regarding physical safeguarding requirements for the ECM (SIGABA):

a. The emergency destruction of the ECM and associated publications carried aboard will be accomplished by throwing them overboard in deep water. The water must be deep enough to insure that the machine and publications cannot be salvaged.

b. The ECM will not be taken into any waters in which the enemy may possibly salvage it, unless adequate provisions are made for its destruction in an emergency. The device must be left at the last staging point or transferred at sea to a ship designated by the force commander. The commander ordering such a deviation from normal cryptographic allowances will inform, at his first opportunity by secure means, all interested parties, including issuing activities when the ECM is removed and when it is returned. These instructions may be modified by the Fleet Commander when specific contemplated operations are such that, in his judgment, the ECM will not be unduly jeopardized.

c. The ECM will not be landed at outlying islands or assault objectives until the following conditions have been satisfied:

(1) The capture of the objective shall be assured as determined by the landing troops commander.

(2) Buildings containing the communication office and code room, in which the ECM will be located, shall be enclosed with barbed wire or equally effective barriers which will delay entry of raiders to the outside of the buildings and allow sufficient time for the destruction of the ECM. The enclosure shall have only one entrance.

(3) A controlled entrance to the code room shall be provided so that only authorized personnel may enter it.

(4) A twenty-four hour armed guard shall be provided to prevent any possibility of enemy raiding parties.

(5) Facilities and measures for protection have been inspected and approved by fleet, attack force or area commander or an authorized representative.

Tab A

ADVANCEMENTS IN THE ART OF CRYPTOLOGY

1. In cryptography and cryptanalysis there are two diametrically opposed points of view. On the security side one finds practicing cryptographers and theoretical cryptanalysts, who prepare cryptographic systems and maintain [illegible] security studies thereof in order to outwit and keep one or more steps ahead of the world's greatest foreign cryptanalysts. On the other hand, in signal intelligence work, there are practicing cryptanalysts and theoretical cryptographers who analyze the cryptographic output of the world, constantly probing it for weaknesses, and who are striving always to outwit and keep abreast of the world's greatest foreign cryptographers.

2. In the ideal situation the cryptographic principles employed by our forces should be strong enough to deny successful solution by the enemy cryptanalysts and, on the other hand, friendly cryptanalysts should be able to solve all the cryptographic systems employed by the enemy. In practice, however, the ideal situation does not exist.

a. From the view point of the cryptanalyst, cryptographic systems might be grouped into the following categories:

(1) Where the principles and general solution are not known.

(2) Where the principles are known but the general solution is not known, or if known, requires such an extraordinary amount of data or work as to make its application prohibitive.

(3) Where the principles and general or specific solutions are known but application of the general solution is sufficiently difficult or the occurrence of special cases is so indeterminate that the amount of data or work required may or may not be compatible with the value of intelligence to be obtained.

(4) Where the principles and general solution are known and the technique of solution is comparatively easy, which causes the cryptanalyst to do a small amount of work which is generally compatible with the value of the intelligence to be obtained.

b. The enemy cryptanalyst is constantly striving to solve and exploit the above mentioned systems. Through analysis, treason, espionage, physical compromise, operators' errors, or breaches of secrecy discipline, the enemy may eventually place all of our present cryptographic systems (except one-time systems) in category (4) above.

c. Concurrent with the above mentioned enemy activity, the friendly cryptographer is constantly subjecting our present devices to cryptanalytic attack in order to discover their weaknesses. When weaknesses

TAB F

are found the necessary measures are taken either to correct the weaknesses or to replace the weak system with a strong one. Thus, the friendly cryptographer strives to place all of our systems in category (1) above, if possible.

d. On the other hand, the enemy can deduce the success our cryptanalysts have upon enemy traffic by observing those systems which we employ, our rules of use, and the changes in systems and rules which we make from time to time. Frequently, the fact that we do not choose to use a given system may indicate to the enemy that our cryptanalysts have had success in the solution of such a system. Conversely, if, through devious means, the enemy can learn the details of our systems which he cannot solve cryptanalytically, he can in turn utilize those principles for his own cryptography, and feel perfectly safe in doing so since he will assume that we have had little cryptanalytic success with that system ourselves.

e. For the reasons given above, the cryptologic art is not static and devices which are presently considered to be high security devices may become medium or low security devices within a few years and obsolete thereafter. For example, early in this war certain cryptographic principles appeared to be very strong, but today are vulnerable, under certain circumstances, to rapid analytical machinery. In fact, improved electronic techniques indicate that within several years their application to the general solution of the Converter M-134-C (SIGABA) may be fast enough to be practical. In summary, the general policy governing the utilization of cryptographic principles should take cognizance of the requirement for continual downgrading of the classification of current cryptographic principles consistent with advancements in the cryptanalytic art.

Tab F

~~RESTRICTED~~

THE RELATIVE IMPORTANCE OF SIGNAL SECURITY AND SIGNAL INTELLIGENCE

1. The need for security. The ultimate objective of all military operations is the destruction of the enemy's armed forces in battle. Among the elements which a commander uses to attain his objective is the element of surprise. Surprise is sought throughout an action by every means and by every echelon of command. Surprise is produced through measures which either deny information to the enemy or positively deceive him as to our dispositions, movements, and plans. Counterintelligence, as one of the measures used to produce surprise, has as its objective the destruction of the effectiveness of the enemy intelligence system. Signal communications security is one of the counterintelligence measures available to a command. Secrecy in the transmission of messages is of the utmost importance and Commanding Officers are responsible for the maintenance of signal security within their commands. Cryptographic mechanisms and systems are among the signal security means available to a command.

a. The above paragraph is substantiated by the following paragraphs from FM 100-5, Field Service Regulations, Operations, 15 June 1944:

"112. The ultimate objective of all military operations is the destruction of the enemy's armed forces in battle. The ability to select objectives whose attainment contributes most decisively and quickly to the defeat of the hostile armed forces is an essential attribute of an able commander."

. . . . . .

"115. Through offensive action a commander exercises his initiative, preserves his freedom of action, and imposes his will on the enemy." . . . . . .

. . . . . .

"119. Surprise must be sought throughout the action by every means and by every echelon of command. It may be obtained by fire as well as by movement. Surprise is produced through measures which either deny information to the enemy or positively deceive him as to our dispositions, movements, and plans. Terrain which appears to impose great difficulties on operations may often be utilized to gain surprise. Surprise is furthered by variation in the means and methods employed in combat and by rapidity of execution."

"Surprise often compensates for numerical inferiority of force"

. . . . . .

"281. The object of counterintelligence is to destroy the effectiveness of the enemy intelligence system.

~~RESTRICTED~~

FOB G

"Counterintelligence measures available to a command include secrecy; discipline; concealment; tactical measures designed to deceive the enemy; restrictions on the preparation, transmission, and use of documents; signal communication security; precautions in the movements of troops and individuals; regulation of the activities of newspaper correspondents, photographers, radio news commentators, and visitors; censorship; counterespionage, and counterpropaganda."

"288. Secrecy in the transmission of messages is of the utmost importance.". . . . . .

b. The need for security is further modified by the following paragraph from FM 101-10, Staff Officers' Field Manual, Organization, Technical and Logistical Data, 21 December 1944:

"810. c. The conflicting requirements of speed and security vary according to circumstances. Staff officers and signal communication personnel must be guided by general principles, applied with full appreciation of existing circumstances, rather than by rigid regulations. Reasonable security at all times should be the goal. In general, in a strategic situation some speed may be sacrificed to meet the greater secrecy requirements, while in tactical situations secrecy is often of secondary importance and may be sacrificed to meet the greater speed requirements. Various cryptographic devices and methods are available to meet both situations."

2. From the intelligence viewpoint the following paragraphs from FM 100-5 are pertinent:

"120. To guard against surprise requires a correct estimate of enemy capabilities, adequate security measures, effective reconnaissance, and readiness for action of all units. Every unit takes the necessary measures for its own local ground and air security. Provision for the security of flanks and rear is of special importance.

"130. In any operation, the commander must evaluate all the available information bearing on his task, estimate the situation, and reach a decision. Estimation of the situation is a continuing process and changed conditions may call for a new decision at any time.

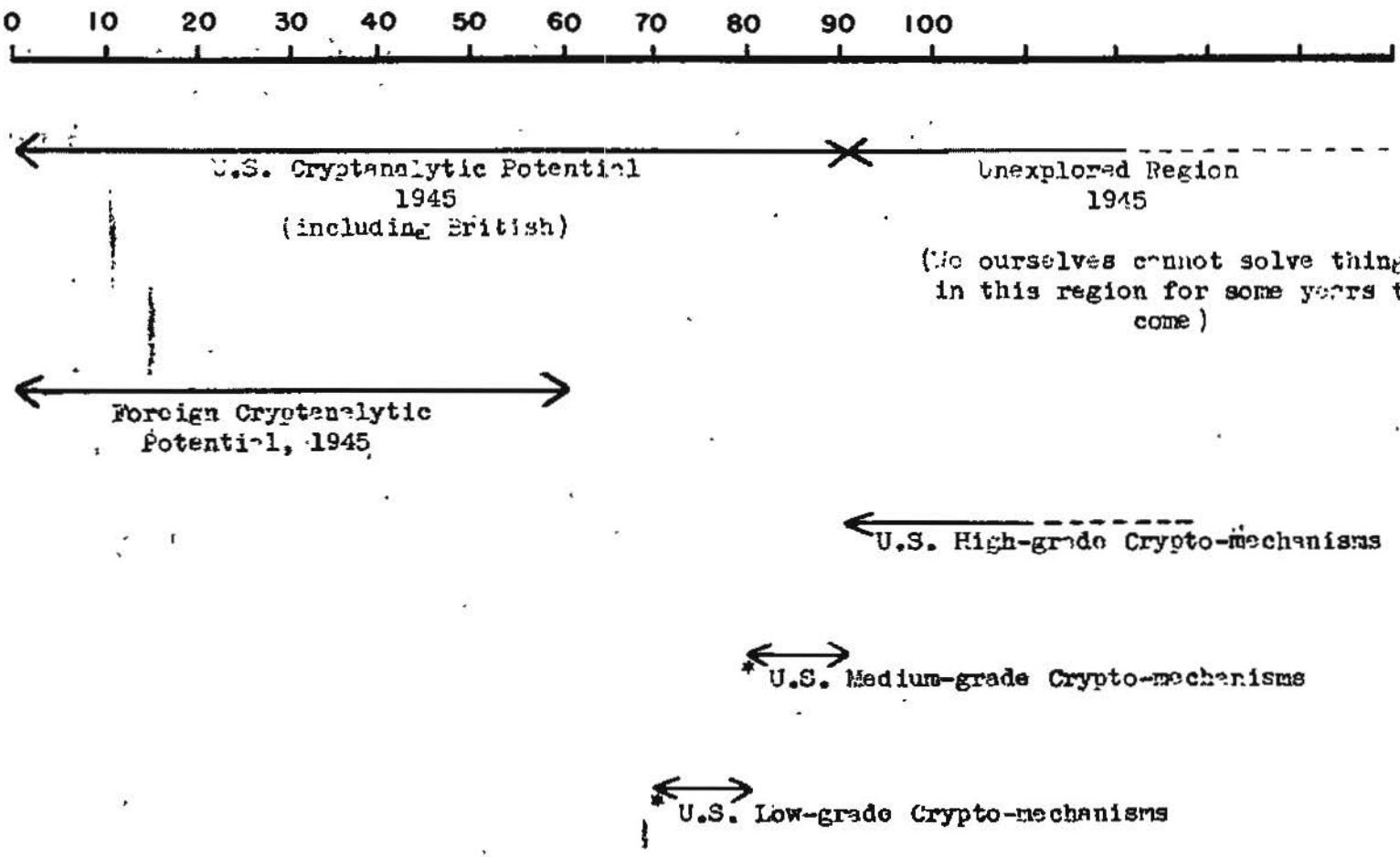
"131. The estimate often requires rapid thinking, with consideration limited to essential factors. In campaign, exact information concerning the enemy can seldom be obtained. To delay action in an emergency because of incomplete information shows a lack of energetic leadership, and may result in lost opportunities. The commander must take calculated risks."

"186. From adequate and timely military intelligence the commander is able to draw logical conclusions concerning enemy lines of action. Military intelligence is thus an essential factor in the estimate of the situation and in the conduct of operations."

Tab .

TAB II

~~SECRET~~



*If these get captured or compromised and are adopted by enemy, we can still read their traffic.

11 Oct. 45

~~SECRET~~

TOP SECRET

A

CIPHONY AND CIFAX BRANCH PROJECTS

FISCAL YEAR 1946

SUMMARY ANNUAL REPORT FY 1946

RESEARCH AND DEVELOPMENT DIVISION

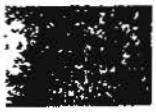
B

U. S. ARMY CIPHONY SYSTEMS

25 JANUARY 1946

SUMMARY ANNUAL REPORT FY 1946

R & D DIVISION



TOP SECRET

TAB 37A

CIPHONY AND CIFAX BRANCH PROJECTS

FISCAL YEAR 1946

SUMMARY ANNUAL REPORT FY 1946

RESEARCH AND DEVELOPMENT DIVISION

0 [illegible] 193

Doc ID: 6579558

TOP SECRET

CIPHONY AND CIFAX BRANCH PROJECTS
FISCAL YEAR 1946

Project No.	Full Title and Sub-Projects	[illegible]	Purpose	Priority	Date of Assignment	Technical Committee Action	Date of Project Approval	Origin of Request	[illegible]	[illegible]	No. of Sets	Date of Delivery	Date of Completion	Labor Costs Civ.	Labor Costs Mil.	[illegible]	Material Costs	Status 30 June 1946	Liaison Agencies	Related Projects	File References	Engineer in Charge and Technical Consultants	Notes
2-1101	Operational T. D. S. Sub-Projects: 1 - Lab'y Tests of T. D. S. 2 - Air Force Tests of T. D. S. 3 - Life Tests of T. D. S. 4 - Wire Appliqué Unit 5 - Special Wire Installation 6 - Inspection of T. D. S. 7 - Liaison on "C" Branch [illegible] 8 - [illegible] Volt D.C. Power Supplies 9 - Wire Appliqué [illegible] Specifications	None	To determine the performance of [illegible] Speech Privacy Equipment [illegible] on radio and wire circuits and to make such installations as required to accomplish this.	None	22 October 1943	8 June 1943 See Notes	5 August 1943 Verbal Approval by Maj. [illegible]	[illegible]	None	None	3			5,700.90	2,099.[illegible]	360.60	None	[illegible]	[illegible]	2-1103	[illegible]	Capt. [illegible]; Lt. [illegible]; Lt. [illegible]	F Branch Project No. [illegible]. Responsibility for [illegible] development was transferred to [illegible] from Camp [illegible] Signal Laboratory effective [illegible] August 1943 on [illegible]. Tentative M/C's were set forth in [illegible] Case [illegible] which was approved by [illegible] Chief of Staff, [illegible] June 1943. Project 2083 was established to cover work to be done by F Branch engineers. Report pending.
2-1103	AN/[illegible]-1A Design Changes and Testing	None	To review and approve design changes in Speech Equipment, [illegible], and to compile detailed engineering data for use in installation and maintenance.	[illegible]	25 May 1944	Item No. [illegible] [illegible] Meeting [illegible] 5 June 1944 See Notes	24 April 1945 Col. [illegible]	[illegible]	None	None	3			1,792.00	53.[illegible]	3[illegible]	None	[illegible]	[illegible] Eng. Lab.	2-1101	[illegible]	Lt. [illegible]; Lt. [illegible]; [illegible]	F Branch Project No. [illegible]. Operational tests were carried out [illegible] F Branch personnel at [illegible] Eng. Laboratories.
2-1108	AN/[illegible]-3 Liaison and Testing	None	To supervise work of outside contractors on service test models of [illegible], to make engineering tests of these models, and to conduct liaison on service tests.	[illegible]	23 October 1943	Item No. [illegible] [illegible] Meeting [illegible] [illegible] February [illegible] See Notes	26 December 1944 Col. [illegible]	[illegible]	Western Electric [illegible]	[illegible]	3			12,[illegible]	530.[illegible]	3[illegible]	64.[illegible]	[illegible]	[illegible]	2-1103	[illegible]	Capt. [illegible]; Lt. [illegible]; Lt. [illegible]	F Branch Project No. [illegible]. Military characteristics were [illegible] to [illegible] Case [illegible]. [illegible]
2-1101	Teletypewriter Adapter for AN/[illegible] - 2, 3	None	To engineer a complete laboratory model of a teletypewriter adapter to determine the feasibility of its use with Speech Equipment, AN/[illegible].	[illegible]	22 October 1943	Item No. [illegible] [illegible] Meeting [illegible] [illegible] February [illegible] See Notes	28 December 1944 Col. [illegible]	[illegible]	None	None	3			1,672.00	[illegible]	368.50	None	[illegible]		2-1108	[illegible]	Capt. [illegible]; Lt. [illegible]	F Branch Project No. [illegible]. Report pending.
2-[illegible]	General Ciphony Research a. [illegible] of Ciphony Systems b. [illegible] T. D. S. c. Security Studies of [illegible] d. [illegible] Ciphony System e. [illegible] Field Test Studies f. [illegible] Recorder and [illegible] System g. Study of [illegible] Wave Form Protection in Pulse Systems h. Pulse Ciphony System for [illegible] i. Fundamental Ciph. Derivation j. Investigation of [illegible] Systems Similar to [illegible] k. Basic Ciphony Cryptologic Research l. Improved Key Generator for [illegible] m. Key Generator for Signal Corps [illegible] n. Study of [illegible] System	None	To conduct a research program for the advancement of methods and techniques in the field of ciphony.	None	None	None	17 October 1945 Col. [illegible]	[illegible]	None	None	2			17,[illegible]	2,[illegible]	[illegible]	487.77	See Notes	[illegible] Eng. Lab.		[illegible]	Lt. [illegible]; Lt. [illegible]; Lt. [illegible]; Lt. [illegible]; Lt. [illegible]; Capt. [illegible]; Dr. [illegible]	General Research on Yearly Basis. F Branch Project No. [illegible].
2-[illegible]	Speech Equipment, AN/[illegible]-5 a. [illegible] Channel Vocoder System b. Two-Dimensional Ciphony System c. Security Studies - [illegible] Channel Vocoder System d. Security Studies - Two-Dimensional Ciphony System f. [illegible]	None	To review in general, ciphony methods in light of the requirements of the AN/[illegible]-5 ciphony equipment and to construct and test laboratory equipment to demonstrate the practicability of the selected ciphony method.	[illegible]	6 April 1945	Item No. [illegible] [illegible] Meeting [illegible] 23 April 1945	17 July 1945 See Notes	[illegible]	None	[illegible]	1			[illegible]	[illegible]	[illegible]	3[illegible]	[illegible]			[illegible]	Lt. [illegible]; Lt. [illegible]; Lt. [illegible]; Lt. [illegible]; Capt. [illegible]; Lt. [illegible]	F Branch Project No. [illegible]. This was originally the development of an improved Vocoder Ciphony System. This work was redirected to meet the requirements of the AN/[illegible]-5. Letter of 17 July 1945 from Col. [illegible] to Chief, [illegible], [illegible] and constituted the approval.
2-2104	Speech Equipment, AN/[illegible]-6	None	To review ciphony methods in light of the requirements of the AN/[illegible] and to construct and test laboratory equipment to demonstrate the practicability of the selected ciphony method.	[illegible]	6 April 1945	Item No. [illegible] [illegible] Meeting [illegible] 23 April 1945	13 October 1945 Col. [illegible]	[illegible]	None	None	3			None	None	None	None	See Notes			[illegible]	Lt. [illegible]	F Branch Project No. [illegible]. Work started after the close of F. Y. 1946.
[illegible]	Security Studies of [illegible] Equipment, AN/[illegible]-16	None	To obtain and evaluate technical data to establish from the security viewpoint a basis for the use of [illegible] Equipment AN/[illegible]-16 with [illegible]	None	None	None	[illegible] March 1945 Col. [illegible]	Signal Corps [illegible]	None	None	1			7,[illegible]	[illegible]	3[illegible]	[illegible]	[illegible]			[illegible]	Capt. [illegible]; Lt. [illegible]; Lt. [illegible]; Lt. [illegible]; Lt. [illegible]	Project was completed before the [illegible] project numbering system became effective. [illegible] security analysis forwarded to [illegible]. Report pending.
2-1[illegible]	Transportation Cifax System AN/[illegible]-1	[illegible]	To develop equipment that will provide adequate security for facsimile transmission of cryptographic material and make possible the transmitting and receiving of half-tone pictures with [illegible] shading from black to white.	2	3 June 1944	None	Development work was assigned 1 June 1943 to Lt. Col. [illegible] and [illegible] Development Branch Project [illegible]. See Notes	Army Communications Service	None	None	3			5,[illegible]	2,[illegible]	[illegible]	None	[illegible]	Army Com. Service [illegible] [illegible]	[illegible]	[illegible] History of Cifax [illegible]	Lt. [illegible]; Lt. [illegible]; Lt. [illegible]	Verbal request for this development by Lt. Col. [illegible], Executive Officer, Army Com. Service, in 1943. Correspondence indicates that verbal approval was given by Maj. Gen. [illegible], Chief, Army Com. Division. On [illegible] 1945, [illegible] Report pending.
[illegible]	[illegible] Cifax System AN/[illegible]-2	[illegible]	To develop equipment for the [illegible] terminals for the [illegible] of facsimile communications. [illegible] and [illegible] pictures [illegible]	[illegible]	3 June 1944	None	8 January 1946 [illegible] Army Communications Service	Army Communications Service	None	None	[illegible]	See Notes		9,[illegible]	3,[illegible]	[illegible]	None	[illegible]	Army Com. Service [illegible] Teletype Corp.	[illegible]	[illegible] History of Cifax	Capt. [illegible]; Lt. [illegible]; Lt. [illegible]; Lt. [illegible]; Lt. [illegible]	F Branch Project No. [illegible]. [illegible]
2-[illegible]	Special Cifax Investigations a. AN/[illegible] Cifax Adapter b. Random [illegible] Key Generator c. [illegible] Key Generator d. High Speed [illegible] e. Dual Wire Recorder	None	To demonstrate the value and applicability of techniques proposed for Cifax systems and equipment and to conduct liaison with outside agencies and industries engaged in facsimile development.	None	None	None	[illegible] January 1946 Col. [illegible]	[illegible]	None	None	1			8,[illegible]	[illegible]	1,0[illegible]	69.[illegible]	See Notes	[illegible] [illegible] Lab. [illegible]		[illegible] History of Cifax [illegible]	Lt. [illegible]; Lt. [illegible]; Lt. [illegible]; Lt. [illegible]; Lt. [illegible]	Coordination with [illegible]. F Branch Project No. [illegible]. General Research on Yearly Basis.
2-[illegible]	Investigation of Cifax [illegible]-3 a. Security Studies of Key Generator for [illegible]-3 b. Key Generator for [illegible]-3 Cifax	None	To investigate improvements of the present [illegible] Cifax System.	None	None	None	[illegible] March 1946 [illegible]	[illegible]	None	None	2			2,[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	Lt. [illegible]; [illegible] Development Section; Lt. [illegible]	Coordination with [illegible]. [illegible] will be used in future Cifax equipment.

NOTE: Labor costs are totals as of 30 June 1946. Material costs are "[illegible]" funds after 1 April 1946.

TOP SECRET

TOP SECRET

TAD 375

U. S. ARMY CIPHONY SYSTEMS

25 JANUARY 1946

SUMMARY ANNUAL REPORT FY 1946

R & D DIVISION

SYSTEM	SECURIT
SIGSALY (RC-220)	INFINITE (WITH SIGRL
SIGRIT (AN/GSQ-2,3)	VERY HIGH
PROBABLE ADDITIONAL SYSTEMS REQUIRED FOR INTEGRATED COMMUNICATION SYSTEM	HIGH
AN/GSQ-5	MEDIUM-HIG
AN/TRA-16	MEDIUM-LOW
AN/GSQ-4	MEDIUM-LOW
AN/GSQ-1A (SIGMAR)	LOW

TOP SECRET

U.S. ARMY CIPHONY SYSTEMS

SYSTEM	SECURITY	SIZE	TYPE	OPERATES WITH	SPEECH QUALITY	PERFORMANCE	SIGIRA REQUIREMENT	INTERESTED SERVICE	STATUS OF DEVELOPMENT	ADDITIONAL USES
SIGSALY (RC-220)	INFINITE (WITH SIGRUY)	VERY LARGE 60 TONS	VOCODER	SPECIAL WIRE AND RADIO	FAIR	GOOD	XI	FIXED PLANT	IN SERVICE	—
SIGRIT (AN/GSQ-2,3)	VERY HIGH	LARGE 2 TONS	VOCODER	NORMAL RADIO (SSB RECEPTION) 4-WIRE LAND LINES	FAIR	GOOD	XII	AGF AAF	PRE-PRODUCTION MODELS	TELETYPE WITH ADAPTER FACSIMILE WITH ADAPTER
PROBABLE ADDITIONAL SYSTEMS REQUIRED FOR INTEGRATED COMMUNICATION SYSTEM	HIGH	MEDIUM-SMALL 200 POUNDS	PULSE (SINGLE AND MULTI-CHANNEL)	SPECIAL RADIO AND WIRE (WIDE BAND)	GOOD	VERY GOOD	—	AGF (IMPLIED)	BASIC RESEARCH	FACSIMILE AND TELETYPE
AN/GSQ-5	MEDIUM-HIGH	MEDIUM 730 POUNDS	—	NORMAL RADIO WIRE (PUSH-TO-TALK?)	—	—	XII	AGF	PRELIMINARY INVESTIGATION	—
AN/TRA-16	MEDIUM-LOW	MEDIUM 1000 POUNDS	PULSE (7 CHANNELS)	RADIO AN/TRC-6 (WIDE BAND)	GOOD	GOOD	NONE	AGF AAF	PRE-PRODUCTION MODELS	—
AN/GSQ-4	MEDIUM-LOW	VERY SMALL 15 POUNDS	—	NORMAL RADIO AND WIRE (PUSH-TO-TALK?)	—	—	XIII	AGF	BASIC RESEARCH	—
AN/GSQ-1A (SIGMAR)	LOW	SMALL 40 POUNDS	TDS	NORMAL RADIO AND WIRE (PUSH-TO-TALK)	FAIR	FAIR	XIII (INADEQUATE)	AGF	IN SERVICE (LIMITED)	—

NOTE: Blank Spaces Indicate That Type, Quality, etc Are Not Yet Determined

5 January 1946

MEMORANDUM FOR THE CHIEF SIGNAL OFFICER

SUBJECT: Research and Development Responsibilities.

1. After thorough discussion between representatives of the ACofS, G-2 and the Chief Signal Officer, it has been concluded that there can be no rigid division of responsibility between the Military Intelligence Division and the Chief Signal Officer relative to the research and development of cryptographic equipment which is an integral part of the communication equipment. It has also been concluded that it is essential that the closest cooperation and coordination be effected between these two agencies in this matter. It is recognized that it is necessary that the Chief Signal Officer be in a position to fulfill his responsibilities for providing the Army with adequate communication facilities. Likewise, it is recognized that it is necessary that the Army Security Agency of the Military Intelligence Division be in a position to discharge its responsibilities for providing the Army with secure cryptographic equipment and material. Accordingly, the following general division of responsibilities in the research and development of cryptographic equipment are agreed:

a. The Chief Signal Officer will be responsible for research and development of communication equipment containing cryptographic elements as an integral part thereof and the Chief, Army Security Agency will be responsible for providing the specifications of the cryptographic principles and circuits of any cryptographic elements in such communication equipment, and for analyzing for the purposes of approving or disapproving any specifications of cryptographic principles or circuits presented by the Chief Signal Officer arising incidental to the research and development of communication equipment. In the event of disapproval of the cryptographic principles or circuits so presented, any faults in principles or circuits will be disclosed, to the greatest extent consistent with security, to cleared personnel selected by the Chief Signal Officer to the end that the Chief Signal Officer may benefit from such analysis.

b. The Chief Signal Officer will not undertake the development of a cryptographic component, which is an integral part of a piece of communication equipment, without full participation in such development by the Army Security Agency. In this connection, it will be the responsibility of the Chief, Army Security Agency to furnish necessary liaison officers or engineers at Signal Corps Engineering Laboratories to participate in the research and development of any cryptographic or secrecy elements which are to be included as an integral part of communication equipment.

c. The Chief, Army Security Agency will be responsible for the research and development of cryptographic equipment and material which is not included as an integral part of communication equipment and for the research and development of cryptographic equipment which is utilized with communication equipment but is not an integral part of such equipment and does not materially affect the operational functioning of such equipment.

2. If a fundamental difference of opinion arises during the development of communication equipment and remains unresolved between the communications engineers of the Chief Signal Officer and the communication security engineers of the Army Security Agency, the matter will be referred to the respective Chiefs who will consult on the matter, after which the Chief Signal Officer will be responsible for making a decision in the matter.

3. The Chief, Army Security Agency, will remain responsible for service and cryptanalytic tests of all cryptographic equipment and secrecy devices.

4. Action will be initiated by this Division to amend War Department letter, AG 322 (4 Sep 45) OB-S-B-M, 6 September 1945, subject: Establishment of the Army Security Agency, in accordance with the above.

CLAYTON BISSELL
Major General, GSC
Assistant Chief of Staff, G-2

INTERCEPTED MESSAGES

1945	Total
July	735,590
August	615,252
September	339,287
October	211,596
November	156,582
December	239,074
1946	
January	164,622
February	91,243
March	110,509
April	112,465
May	94,437
June	113,691

~~TOP SECRET~~

INTERCEPT EQUIPMENT BRANCH PROJECTS

FISCAL YEAR 1946

SUMMARY ANNUAL REPORT, FY 1946

RESEARCH AND DEVELOPMENT DIVISION

~~TOP SECRET~~

[redacted]

[illegible]

TOP SECRET

TAB 40

INTERCEPT EQUIPMENT BRANCH PROJECTS

FISCAL YEAR 1946

SUMMARY ANNUAL REPORT, FY 1946

RESEARCH AND DEVELOPMENT DIVISION

TOP SECRET

Doc ID: 6579558

TOP SECRET

INTERCEPT EQUIPMENT BRANCH PROJECTS FISCAL YEAR 1946

Proj. No.	Full Title and Sub-Projects	Cover Name or Short Title	Purpose	Date of Project Approval	Origin of Request	Contract Number Company Amount, Dates	Specification Number	No. of Units	Date of Delivery	Date of Completion	Labor Costs Eng. (*See Footnote)	Labor Costs Lab.	Labor Costs Shop	Material Costs	Status 30 June 1946	Liaison Agencies	Related Projects	File References	Engineer in Charge and Technical Comm.
501	Two-Channel Tape Intercept Equipment	PEPPER	To construct six two-channel multiplex intercept units.	6 February 1946 Gen. W. P. Corderman	WDGAS-94	None	None	7			$ 2,022.00	1,514.00	619.00	156.37	98%	Navy	3-5506	AS-71 28-3 AS-73 63.002	Mr. R. Beckman
[illegible]	PEPPER Test Equipment	None	To construct special test equipment to be included as a component part of each PEPPER unit. (See Project 3-5501)	12 June 1946 Dr. S. Kullback	WDGAS-94	None	None	7			44.00	228.00	8.40	None	75%		3-5501	AS-71 28-3 AS-73 65.002	Mr. R. Beckman
502	Universal Multiplex Intercept Equipment	BOULDER	To construct two nine-channel units to intercept all presently known types of Tape multiplex transmissions.	Not Approved. (See "Notes")	WDGAS-94	None	None	2			None.	None	None	None	See Notes.	Navy	3-5511	AS-71 28.3	
503	Construction of Antenna Coupler	None	To construct a coupler which will isolate intercept antenna from transmission line and transmission line from receiver.	24 April 1946 Col. S. Kullback	WDGAS-94	None	None	1			8.00	55.00	14.80	None	50%			AS-71 28-3 AS-73 66.11	Mr. A. R. [illegible]
504	Construction of Low Frequency Multicouplers	None	To construct and test ten low frequency multicouplers which will receive signals from an unbalanced antenna and feed a balanced output to ten separate receivers.	29 April 1946 Col. S. Kullback	WDGAS-94	None	None	10			294.00	487.00	353.40	None	70%			AS-71 28-3 AS-73 66.12	Mr. A. P. [illegible]
505	Construction of the Frequency Modulator	None	To construct and test four frequency modulators to be used with a General Radio 605-B Signal Generator for aligning Radio Intercept Receivers.	25 April 1946 Col. S. Kullback	WDGAS-94	None	None	4			159.00	131.00	120.40	None	73%			AS-71 28-3 AS-73 65.13	Mr. W. A. De[illegible]
506	Construction of Diversity High Frequency Oscillator	None	To construct and test forty-five diversity high frequency oscillators. Each unit will be used with three Super-Pro Receivers in a standard Space-Diversity Receiving System.	7 May 1946 Col. H. G. Hayes	WDGAS-94	None	None	45			180.00	4.00	16.20	None	5%			AS-71 28-3 AS-73 66.14	Mr. A. P. [illegible]
509	Switching and Control Panels	None	To construct standard switching and control panels for Intercept Station.	20 June 1946 Col. H. G. Hayes	WDGAS-94	None	None	11			2.00	None	None	None	See Notes		3-5510	AS-71 28-3 AS-73 64.20	Mr. W. A. De[illegible]
510	Receiver Cabinets	None	To construct two receiver cabinets for rack mounting of Navy type RBA receivers and one rack mount assembly for RBA power supply.	14 June 1946 Dr. S. Kullback	WDGAS-94	None	None	3			None	None	None	None	See Notes		3-5509	AS-71 28-3 AS-73 65.21	Mr. H. D. [illegible]
[illegible]	AN/TGC-1 Radio Teletype Modification Units	None	To complete the construction of equipment necessary to modify AN/TGC-1 radioteletype equipment to provide a variable frequency tone teletype intercept terminal.	11 June 1946 Col. H. G. Hayes	WDGAS-94	None	None	5			None	None	None	None	See Notes		4-5505	AS-71 28-3 AS-73 65.10	Mr. W. A. De[illegible]
[illegible]	Service Tests For Rectifier	None	To compare tests of the RA-61-A Power Unit and the PE-225 Power Unit to determine the suitability of the equipment for service use.	9 April 1946 Col. S. Kullback	WDGAS-24 Asst. Chief, Staff	None	None	1			64.00	75.00	22.80	1.88	95%			AS-71 28-3 AS-73 67.30	Mr. A. D. [illegible]
[illegible]	General Research Intercept Equipment Wire Intercept Carrier-Shift Receiver	None	To conduct research study within Intercept Equipment Branch.	14 May 1946 Col. S. Kullback	WDGAS-73	None	None				60.00	None	22.50	10.00	100% Reallocated for F.Y. 1947			AS-71 28-3	Mr. R. Brow[illegible] Mr. W. A. D[illegible] Mr. A. D. M[illegible]

*NOTE: Labor costs are total costs as of 30 June 1946. Material costs are "610" funds after 1 July 1946.

TOP SECRET

TABLE 8

NUMBER OF MACHINES
1945

Machine Type	July	Aug	Sept	Oct	Nov	Dec
S.C. Unit	5	5	5	5	5	5
Key-punch	89	89	78	74	64	64
Tape-punch	30	30	4	3	3	3
Card Operated Typewriter	11	11	7	4	4	4
Sorter	85	85	79	73	63	60
Printer	46	46	35	30	30	30
Reproducer	51	51	45	39	33	33
Collator	39	39	31	27	23	23
Interpreter	7	7	4	4	4	3
Multiplier	2	2	1	1	1	1
Verifier	15	15	10	10	10	10
Relay-gate	15	15	15	15	15	15
P.S. Gang-punch	6	6	6	6	6	6
Facsimile Poster	2	-	-	-	-	-
Total	403	401	320	291	261	257

1946

	Jan	Feb	Mar	Apr	May	June
S.C. Unit	5	5	5	5	5	3
Key-punch	55	55	50	50	50	36
Tape-punch	3	3	3	3	3	2
Card Operated Typewriter	4	4	4	4	4	4
Sorter	55	50	41	39	35	30
Printer	30	30	30	28	28	23
Reproducer	33	29	25	25	25	20
Collator	23	20	17	15	15	11
Interpreter	3	3	2	2	2	2
Multiplier	1	1	1	1	1	1
Verifier	10	10	10	10	10	10
Relay-gate	15	15	11	11	7	6
P.S. Gang-punch	6	6	6	6	5	4
Facsimile Poster	-	-	-	-	-	-
Total	243	231	205	199	190	152

ID: 6579558

TABLE 12

DISTRIBUTION OF PROJECTS
BY ORIGINATING UNIT
1945

WDGAS #	July	Aug	Sept	Oct	Nov	Dec	Total
15	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-
80	19	16	6	10	4	10	65
93	-	-	-	-	-	-	-
93 B	7	4	4	13	10	4	42
93 C	8	3	5	6	10	6	38
93 D	13	7	-	3	2	4	29
93 G	1	2	1	-	-	1	5
93 H	6	11	8	8	6	18	57
93 M	119	60	17	9	2	3	210
93 P	5	5	6	12	17	3	48
95	-	2	-	-	-	-	2
TOTAL	178	110	47	61	51	49	496

1946

	Jan	Feb	Mar	Apr	May	June	Total
15	1	-	-	-	1	2	4
70	-	-	-	1	1	-	2
80	7	14	12	8	10	11	62
93	-	1	-	-	1	1	3
93B	11	9	7	10	16	8	61
93 C	7	7	6	9	9	4	42
93 D	4	4	4	4	8	3	27
93 G	3	4	1	3	2	1	14
93 M	25	26	28	34	94	40	247
93 M	2	-	-	1	9	4	16
93 P	11	5	9	8	13	16	62
95	-	-	1	-	1	1	3
TOTAL	71	70	68	78	165	91	543

[redacted]

TOP SECRET

CRYPTOLOGIC BRANCH PROJECTS

FISCAL YEAR 1946

A

SUMMARY ANNUAL REPORT FY 1946

RESEARCH AND DEVELOPMENT DIVISION

ELECTRONIC AND ELECTROMECHANICAL

BRANCH PROJECTS

B FISCAL YEAR 1946

SUMMARY ANNUAL REPORT FY 1946

RESEARCH AND DEVELOPMENT DIVISION

TOP SECRET

CRYPTOLOGIC BRANCH PROJECTS

FISCAL YEAR 1946

SUMMARY ANNUAL REPORT FY 1946

RESEARCH AND DEVELOPMENT DIVISION

~~TOP SECRET~~

CRYPTOLOGIC BRANCH PROJECTS
FISCAL YEAR 1946

Project No.	Full Title and Sub-Projects	Cover Name or Short Title	Purpose	Date of Project Approval	Origin of Project	Contract Number Company Amount, Dates	Specification Number	No. of Items	Date of [illegible]	Date of Completion	Labor Costs Eng. (*See Footnote)	Labor Costs Lab.	Labor Costs Shop	Material Costs	Status 30 June 1946	Liaison Agencies	Related Projects	File References	Engineer in Charge and Technical Monitor
[illegible]	Modification of [illegible]	None	Modification and testing of the existing machine to simplify operations and reduce possibility of error.	15 February 1946 Col. S. Kullback	[illegible]-76	None	None	1			345.00	510.00	None	None	[illegible]			AS-71 25.5 AS-76 91.5	Dr. [illegible]
[illegible]	Modification of 70mm Comparator	None	To increase efficiency and speed of comparator.	14 February 1946 Col. S. Kullback	[illegible]-76	None	None	1			110.00	18.00		54.20	[illegible]			AS-71 25.5 AS-76 91.5	Lt. [illegible] Lt. [illegible]
[illegible]	Procurement of Two 70mm Punches	None	To procure two punches and test them for proper operation and performance	27 February 1946 Cdr. [illegible]	[illegible]-76	[illegible], Bureau of Ships Code 951 $40,000	None	1			None	None	None	None		Navy		AS-71 25.5 AS-76 91.5	Dr. [illegible]
[illegible]	Conversion of "[illegible]" for Multi-Match Inter [illegible]	None	To modify existing equipment thereby increasing the variety of problems to which it can be applied.	15 July 1945 Cdr. [illegible]	[illegible]	None	None	1			920.00	2,470.00	None	None	[illegible]			AS-71 25.5 AS-76 91.5	Mr. [illegible]
[illegible]	[illegible] of "M" Frame to [illegible]	None	To construct a small relay-operated unit to be used with existing equipment for determination of initial wheel settings of [illegible] messages by [illegible] methods.	18 March 1946 Col. S. Kullback	[illegible]-76	None	None	1			None	None	None	None	Suspended See Notes			AS-71 25.5 AS-76 91.5	Lt. [illegible] Dixon
[illegible]	Procurement of Electric Counters	None	To procure eighty electric counters from IBM Corporation for the construction of two unilateral counting units, each unit to make individual letter counts from teletype tape.	28 March 1946 Col. [illegible] Hayes	[illegible]-76	Direct Procurement Contract IBM Corporation $429.76	None	2			10.00	75.00	None	815.60	[illegible]	I.B.M.		AS-71 25.5 AS-76 91.5	Lt. [illegible] Dixon
[illegible]	[illegible] of "M" Frames to be Used With "[illegible]"	None	To modify the "[illegible]" to conform to the [illegible] problem.	20 March 1946 Col. S. Kullback	[illegible]-76	None	None	1	5 April 1946 [illegible]-76		75.00	356.00	None	None	[illegible]			AS-71 25.5 AS-76 91.5	Mr. [illegible]
[illegible]	[illegible] Development and Modification Contract	None	To develop ten each Tape or Card to Film Brute Cameras, to modify one Generator No. 5202; two Projectors, [illegible]; a Projector I.C. Film; and a Projector 5202.	25 April 1946 Col. [illegible] Hayes	[illegible]-76	[illegible]-68 Eastman Kodak Co. $139,100	571-[illegible] 571-[illegible] 571-[illegible] 571-[illegible] 571-[illegible]				None	16.00	None	None	See Notes	Eastman Kodak Co.		AS-71 25.5 AS-76 91.5	Capt. [illegible] Lt. [illegible] Lt. [illegible] Dixon
[illegible]	Engineering Services [illegible] Equipment	None	To make available the shop facilities and services of skilled research engineers of Eastman Kodak Co.	28 December 1945 Cdr. [illegible]	[illegible]	[illegible]-45 Eastman Kodak Co. $10,000.00	None	1			None	None	None	10,000.00	See Notes			AS-71 25.5 AS-76 91.5	Capt. [illegible] Lt. [illegible]
[illegible]	[illegible] Typewriter Punch	None	To modify an Electromatic Typewriter so that it will punch 70mm tape.	16 May 1946 Col. S. Kullback	[illegible]-76	None	None	2			57.00	51.30	391.20	None	[illegible]			AS-71 25.5 AS-76 91.5	Lt. [illegible]
[illegible]	[illegible] Wheel Generator	None	To construct an automatic device to generate key for special cryptologic problems.	15 May 1946 Col. S. Kullback	[illegible]	None	None	5			1.00	161.00	None	None	[illegible]			AS-71 25.5 AS-76 91.5	Lt. [illegible]
[illegible]	High Speed [illegible]	None	To study the feasibility of constructing a High Speed Tape Moving Device capable of reading ten consecutive Baudot characters simultaneously.		[illegible]-76	None	None	1			196.00	None	32.00	None	[illegible]			AS-71 25.5 AS-76 91.5	Lt. [illegible]
[illegible]	Modification of "[illegible]" [illegible] Problem	None	To modify and alter wiring and structure of present "[illegible]" for better efficiency on [illegible] problem.	26 June 1946 Dr. S. Kullback	[illegible]	None	None	1			None	None	None	None	See Notes			AS-71 25.5 AS-76 91.5	Dr. [illegible]
[illegible]	Modification of Type [illegible]	None	To modify special Letter Writer Equipment to accomplish necessary shifts of carriage and interpretation of Murray Code on teletype tape. See notes.	9 May 1946 Col. S. Kullback	[illegible]	None	None	20			10.00	225.50	None	None	[illegible]		[illegible]	AS-71 25.5 AS-76 91.5	Lt. [illegible]
[illegible]	General Cryptanalytic Research	None	To account for material and labor costs incurred in cryptanalytic research by Projects and Liaison Sections for period 15 April to 30 June 1946.	[illegible] April 1946 Col. [illegible] Hayes	[illegible]	None	None				15,853.00	None	None	None	[illegible] Reestimated for FY 1947			AS-71 25.5 AS-76 91.5	Dr. [illegible]
	[illegible] Cipher System				[illegible]-16														
	Test [illegible]				[illegible]-20														
	Split [illegible]				[illegible]-21														

NOTE: Labor costs are complete costs as of 30 June 1946. Material costs are "[illegible]" funds after 1 April 1946.

~~TOP SECRET~~

~~TOP SECRET~~ [redacted]

ELECTRONIC AND ELECTROMECHANICAL BRANCH PROJECTS FISCAL YEAR 1946

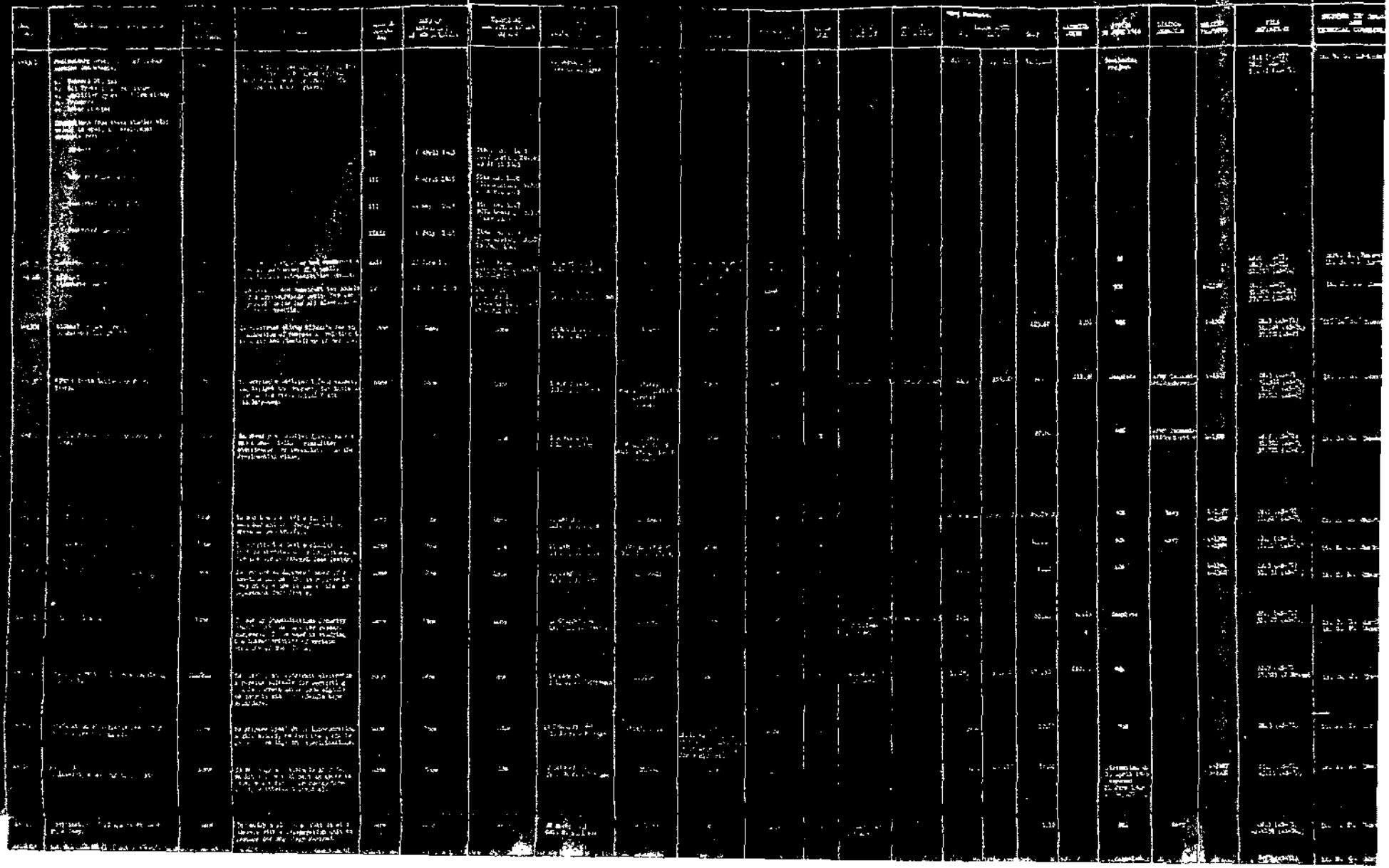
SUMMARY ANNUAL REPORT FY 1946.

RESEARCH AND DEVELOPMENT DIVISION

~~TOP SECRET~~ [redacted]

TOP SECRET

ELECTRONIC AND ELECTROMECHANICAL BRANCH PROJECTS
FISCAL YEAR 1946



~~SECRET~~

WAR DEPARTMENT
The Adjutant General's Office
Washington 25, D. C.

AG 334 (28 Dec 45) OB-S-B-M

KE:jam 20-939 Pentagon

2 January 1946

SUBJECT: Signal Intelligence Missions of Theater Army Security Agency Organizations.

TO: Commander-in-Chief, U.S. Army Forces, Pacific
Commanding General, U.S. Forces, European Theater
Chief, Army Security Agency
Chief, Military Intelligence Service

~~S E C R E T~~
Auth: T. A. G.
Initials: B.M.T.
Date: 2 Jan 46

1. Reference is made to letter AG 322 (4 Sep 45) OB-S-B-M, 6 September 1945, subject: Establishment of the Army Security Agency, particularly to paragraph 7 thereof, which relates to allocation of Army Security Agency personnel to major forces and overseas commands.

2. Army Security Agency organizations under the immediate command of a Director, Army Security Agency, for each theater, have been activated in the European Theater with headquarters at Frankfurt and in the Pacific Theater with headquarters at Manila. It is contemplated that all units and personnel engaged in signal intelligence production and communications security activities (as defined in the AG letter referred to in paragraph 1 above) in a theater will constitute the theater Army Security Agency. Such units and personnel will be attached to the theater for administration and discipline but will remain assigned to the Army Security Agency and will operate under the command of the War Department through the Chief, Army Security Agency, War Department. Directors of theater Army Security Agencies will be the representatives of the War Department in the theater on all Army Security Agency matters.

3. It is recognized that a Theater Commander by virtue of his responsibility for the local situation will have signal intelligence and communications security requirements of primary interest to his command. The War Department will therefore allocate certain units, personnel and facilities to each theater Army Security Agency to serve the needs of the Theater Commander. Such units, personnel and facilities will be referred to as theater-allocated facilities in order to distinguish them from Army Security Agency units, personnel and facilities located within a theater for the performance of War Department missions under the direction of the Chief, Army Security Agency, War Department.

4. The Theater Commander will issue general directives to the Director, Army Security Agency, in his theater for the employment of theater-allocated facilities. Signal intelligence and communications security requirements of subordinate commands, including air commands,

SECRET

will be submitted to the Director, Army Security Agency, after coordination by the Theater Commander.

5. Theater-allocated facilities will normally be employed on the exploitation of military and clandestine communications in the area of the theater concerned. They will not be employed on communications of a commercial or diplomatic nature without specific authorization of the War Department. The War Department may from time to time exclude other types of traffic from theater exploitation when major policy considerations require such action.

6. Experience has proved that the greatest success is achieved in Army Security Agency activities when all facilities throughout the military establishment are operated as an integrated service so that a complete exchange of information can be effected and the greatest economy of personnel realized by avoiding unnecessary duplication of tasks. To achieve such integration complete cooperation and coordination of all Army Security Agency activities is essential. Such coordination will be effected by the War Department through the Chief, Army Security Agency, War Department, who will establish principles and techniques of operation, standards of performance, and review the employment of all Army Security Agency facilities throughout the service in both intelligence and security fields. The following will govern such cooperation:

a. Complete exchange of pertinent technical information between Army Security Agency, War Department and Army Security Agencies in the theaters through special Army Security Agency communication channels is authorized.

b. The Director, Army Security Agency, in each theater will report regularly to the Chief, Army Security Agency, War Department, the current employment of all signal intelligence facilities in the theater. The War Department will review and, after coordination with the Theater Commander, may revise directives for the employment of theater-allocated facilities whenever such revision will result in a more efficient use of all signal intelligence facilities within the military establishment.

SECRET

SECRET

(Cont'd)

c. The Chief, Army Security Agency, War Department, from time to time may assign secondary missions to theater Army Security Agencies for the employment of theater-allocated facilities.

d. Traffic of interest to a theater which cannot be exploited by a theater Army Security Agency will be referred to the Army Security Agency, War Department, which will undertake the analysis of such traffic in accordance with priorities established by the War Department. If such traffic becomes exploitable, the War Department will decide whether such traffic will continue to be exploited by the Army Security Agency, War Department, or whether the exploitation will be transferred to the theater concerned. If exploitation by Army Security Agency, War Department, is directed, complete dissemination of resulting intelligence to theaters concerned will be effected through channels prescribed in security regulations referred to in paragraph 8 below.

7. Collaboration on signal intelligence and communication security matters with agencies and individuals other than those of the Army will be conducted by theater Army Security Agencies only as specifically authorized by the War Department.

8. Material derived from Army Security Agency sources, whether produced in a theater or by the War Department, will not be disseminated except in accordance with the restrictions provided in the security regulations listed below. Regulations presently in effect in the Pacific Theater are: Top Secret letter AG 380.01 (8 July 44) OB-S-B, 10 July 1944, subject: Security Regulations for Special Intelligence, Secret letter AG 311.5 (4 Aug 45) OB-S-B, 6 August 1945, subject: Security Regulations for Pinup Intelligence. Regulations presently in effect in the European Theater are: Top Secret letter AG 312.1 (11 Mar 44) OB-S-B, 15 March 1944, subject: Security of Special Intelligence within European, North African and Middle East Theaters of Operations; Top Secret letter AG 312.1 (11 Mar 44) OB-S-B-M, 15 March 1944, subject: Security of Signal Intelligence within European, North African and Middle East Theaters of Operation. Additional regulations may be promulgated by the War Department from time to time.

By order of the Secretary of War:

/s/ B. J. Tourville
B. J. TOURVILLE
Adjutant General

SECRET

~~[illegible]~~

AG 334 (28 Dec [illegible]) [illegible] [illegible]

(Con[illegible])

COPIES FURNISHED:
The Commanding Generals,
Army Air Forces [illegible]
Army Ground Forces [illegible]
[illegible] Forces
Assistant Chief of Staff, G-1, [illegible] [illegible]
Assistant Chief of Staff, G-2, [illegible] (?)
Assistant Chief of Staff, G-3, WDGS (1)
Assistant Chief of Staff, G-4, WDGS (1)
Assistant Chief of Staff, Operations Division, WDGS (1)
Chief, [illegible] Branch, General Staff (1)

~~[illegible]~~

~~Secret~~

27 November 1945

CG USFET Main Frankfurt Germany

INFO WAR DEPT

CG USFET Rear Paris France

Number WARX 35713

Action CG USFET Main sgn WARCOS cite WARGYNO reurad S 31925 cite EXGCT info USFET Rear.

1. Activated this date is Hq Army Security Agency Europe with station Frankfurt and such other echelons as needed. Strength of 53 offr and 432 EM with grade distribution outlined in 9 June 1945 theater SIB Table of Distribution is authorized. Col S F Cook is designated Chief Army Security Agency Europe.

Hq Army Security Agency Europe will be attached to Hq USFET for admin and discipline and will operate under command of WD through Chief ASA. WD will be responsible for operations and training and the assignment, promotion and transfer of all offr and EM.

Chief ASA Europe as a primary mission will fulfill theater signal intelligence and communication security requirements with facilities available for purpose, and as secondary mission will meet WD requirements using designated fixed stations and other facilities available after primary mission is accomplished.

2. Reorganization of units listed below with team composition shown is authorized: A. 114, 116 Sig Rad Intel Cos to be redesignated Sig Serv Cos with same numbers, each with strength of 9 offr and 248 men with following team composition, T/O and E 11-500 current edition: 1 AC, 1 AB, 1 AJ, 1 AL, 4 IS (less Lts from 2 teams), 1 IW (less Capt), 4 IV, 5 TB, 1 IP, 1 IA, 1 CO, 1 SA, 1 CT, 1 IA. 118 Rad Intel Co may be substituted for 114 or 116. B. 2nd AAF Rad Sq Mob at strength of 17 offr and 295 men composed of following columns current edition T/O and E 1-1027: 1 ea of columns 5, 6, 7, 8, 9, 11, 12, 15, 18, 19, 22, 26, and 3 ea column 24. WARX 22736 of 22 Nov 45 rescinded designation of 2nd Rad Sq as category A.

Activation of Sig Serv Det at strength of 2 offr and 34 men composed of following teams T/O and E 11-500 current edition is authorized: 1 IP, 1 ID, 1 IS (SSN 766 should be substituted for all SSN [illegible].

CM OUT 35713 (Nov 45)

~~Secret~~

~~Secret~~

3. Any recommendations for modification of proposed team composition of units should be submitted in near future. On completion of each reorganization or activation, transfer unit to Hq USA Europe. Inform CSD of effective date of each reorganization, activation and transfer. Action to transfer Army Air Forces, Radio Security Sections will be taken at later date.

4. Utilize all theater Signal Intelligence and Communication Security personnel as sources for implementing foregoing troop basis. Source of additional personnel for filling shortages still under investigation.

End

CM OUT 35713 (Nov 45

~~Secret~~

[redacted]

[redacted]

UNITS SUBORDINATE TO SIGNAL INTELLIGENCE DIVISION, HQ USFET

1 July 1945

On 1 July 1945 there were subordinate to the Signal Intelligence Division the following units:

3250th	Signal Service Company
3251st	Signal Service Company
3252d	Signal Service Company
3253d	Signal Service Company
3254th	Signal Service Company
3255th	Signal Service Company
3256th	Signal Service Company
3257th	Signal Service Company
3258th	Signal Service Company
3259th	Signal Service Company
3260th	Signal Service Company
3261st	Signal Service Company
3262d	Signal Service Company
3263d	Signal Service Company
113th	Signal Radio Intelligence Company
114th	Signal Radio Intelligence Company
116th	Signal Radio Intelligence Company
117th	Signal Radio Intelligence Company
118th	Signal Radio Intelligence Company
121st	Signal Radio Intelligence Company
124th	Signal Radio Intelligence Company
129th	Signal Radio Intelligence Company
135th	Signal Radio Intelligence Company
137th	Signal Radio Intelligence Company
6811th	Signal Security Detachment
6812th	Signal Security Detachment
6813th	Signal Security Detachment

[redacted]

Doc ID: 6579558

~~SECRET~~

~~SECRET~~
By Authority of the
Commanding Officer
[illegible] 27/5/46
Initials Date

HEADQUARTERS
ARMY SECURITY AGENCY
Washington 25, D. C.

GENERAL ORDERS)
NUMBER 16)

27 May 1946

1. The War Department Fixed Intercept Station, designated in Radio WAR 99195 as, operating under column 22 of Signal Intelligence Division Table of Distribution dated 9 June 45 is, effective 0001 1 July 1946, reorganized and redesignated the 6th Detachment, Second Signal Service Battalion under TO 32-1006 dated 24 May 1946, with station at Grosse Gerau, Germany.

The 6th Detachment, Second Signal Service Battalion is designated a unit of Army Security Agency Europe and is attached to United States Forces European Theater for administration and discipline but will remain assigned to the Army Security Agency and will operate under the command of the War Department through the Chief, Army Security Agency, War Department.

(Auth: Letter TAG file AG 334 (23 Dec 45) OB-S-B-M dated 2 Jan 46, subject: Signal Intelligence Divisions of Theater Army Security Agency Organizations.)

BY ORDER OF COLONEL HAYES:

OFFICIAL:

JOHN A. CHODES
Lt. Colonel, Signal Corps
Adjutant

Oscar Wilder, Jr.
OSCAR WILDER, JR.
Capt., Signal Corps
Assistant Adjutant

SPECIAL DISTRIBUTION

~~SECRET~~

Doc ID: 6579558

~~SECRET~~

PARAPHRASE NOT REQUIRED. ~~MINOR AS PARAPHRASED~~
CORRESPONDENCE PER PARAS 44 & and 53 a, AR 380-5

SIGD/Army Security Agency 462
Major R. H. Geddis

13 February 1946

CG, USFET Caserta Italy

INFORMATION:

CG, USFET Main Frankfurt Germany

CG, USFA Vienna Austria

Number: WARX 96957

COMGENMTO Caserta Italy info COMGENUSFET Main Frankfurt Germany, COMGENUSFA Vienna Austria and USFET pass to Director ASA Europe Frankfurt Germany for info from MARCUS signed WARGTWO.

WARX 85713 of 27 November 1945 authorized establishment of Headquarters Army Security Agency Europe with primary function of fulfilling USFET requirements for Signal Intelligence and Communications Security, and authorized transfer to ASA Europe of all USFET Signal Intelligence and Communications Security personnel. Desire also assign responsibility for such ASA functions and personnel in USFA to Director ASA Europe. Desire also that responsibility for fulfilling Signal Intelligence and Communications Security requirements of Mediterranean Theater be assigned to Headquarters ASA Europe and any remaining units or personnel transferred to Headquarters ASA Europe. Detachments or Mediterranean Theater by Headquarters ASA Europe, such detachments or units operating under command of Director ASA Europe for operations and training and for assignment, promotion and transfer of all personnel, and attached to MTO for administration and discipline. Troop basis already approved by War Department for ASA Europe will comprise authorization for total strength of ASA units in both theaters. For record purposes permanent transfers of ASA units or personnel between USFET and MTO will be reported to War Department by Director ASA Europe. Cryptographic materiel for MTO will be supplied by Director ASA Europe. Request confirmation of above.

ORIGINATOR: G-2 (ASA) End.

DISTRIBUTION: OPD

CM-OUT-96957 (Feb 46) DTG 1316[illegible]Z Vh

~~SECRET~~

12 December 1945

CG, USFET Main Frankfurt Germany

CINCAFPAC Comd Manila PI

Number: WARX 83369

From WARCOS

Men who have enlisted or who enlist or reenlist in the future in your theater under the provisions of War Department circular 310, 1945 as amended by section 3 War Department circular 339, 1945 and who were originally assigned to units which have been or will be placed under direct command of War Department in compliance with War Department letter file AG 322 (4 Sep 45) OB-S-B-M, subject: Establishment of the Army Security Agency, dated 6 September 1945 will be assigned to Army security organizations or units except that the option given 3 years enlistees to choose arm or service and theater will not be denied them. However in such cases every effort will be made to encourage such enlistees to choose assignment in Army Security Agency organizations or units. This includes personnel engaged in signal intelligence and communications security activities organized under bulk allotment of theaters, departments, or commands; signal radio intelligence companies; signal service companies (radio intelligence); signal intelligence service detachments, types A, B, C, D, and E; radio intelligence platoons of headquarters and headquarters company, signal battalion; Army Air Forces radio squadrons mobile; radio intelligence platoons of signal companies aviation; or other units and activities organized to perform signal intelligence and communications security functions.

End

CM-OUT-83369 (Dec 45

Doc ID: 6579558

~~SECRET~~

13 December 1945

CINCAFPAC, Admin, Manila, PI

CG, USFET, Main, Frankfurt, Germany

INFORMATION:

CINCAFPAC, Advance, Tokyo, Japan

CG, USAF MIDPAC, Ft Shafter, T H

CG, USFET, Rear, Paris, France

Nr: WARX 89443

Signal WARCOS cite WARGTAO roumade WARX 85713 and 86491 to USFET and WARX 85016 to CINCAFPAC.

Effective this date Chief Army Security Agency in theater is authorized to appoint or reduce enlisted personnel under his command under provisions AR 615-5. He may delegate such authority to commanders of field units under his control.

Chief Army Security Agency in theater will submit recommendations for promotion of officers within company grades under his command to theater commander under provisions of AR 605-12. His recommendations for promotions to or within field grades will be submitted to War Department through Headquarters Army Security Agency Washington.

End

CM OUT89443 (Dec 45)

~~SECRET~~

Doc ID: 6579558

29 December 1945

GO WOPET Dear Paris France

CINCAFPAC Admin Manila PI

Number WARX 90843

From WARCOS

Transfer all personnel with code number 9605 and SSN 709 of Battalion Headquarters Section Headquarters and Headquarters Company Signal Battalion Table of Organization and Equipment 11-16 and all personnel of Radio Intelligence Platoons thereof to Army Security Agency Headquarters in your area. Authority is WD AGO letter, 4 September 1945 subject establishment of the Army Security Agency. Pending publication of revision Table of Organization and Equipment 11-16 authorized strength of company is reduced by the personnel outlined above with associated grades, a total of 4 officers and 64 enlisted men.

End

CM-OUT-90843 (Dec 45)

COPY

~~SECRET~~

PARAPHRASE NOT REQUIRED. ~~HANDLE AS SECRET CORRESPONDENCE~~
PER PARAS 51 I and 60 A, AR 380-5.

Intell. Div/Army Security
Agency WD 8129 Ext 454
Lt. Col R. P. Walker

28 May 1946

CG, USFET Frankfurt Germany

Number: WAR 89628

CORRHUSFET from Chief ASA-21 signed WARGTWO reured S-4600.

Interpretation of personnel policy outlined in paragraph 1, cured WARX 85713 dated 29 November 45 as follows: War Dept will be responsible for supply of technical personnel for which Army Security Agency has training responsibility. All others will be obtained thru normal theater channels. Once assigned to ASA, promotion, transfer and future assignment will be under control of WD thru ASA Chief.

End.

S-4600 is CM IN 5737 (25 May 46)

ORIGINATOR : G-2 (ASA)

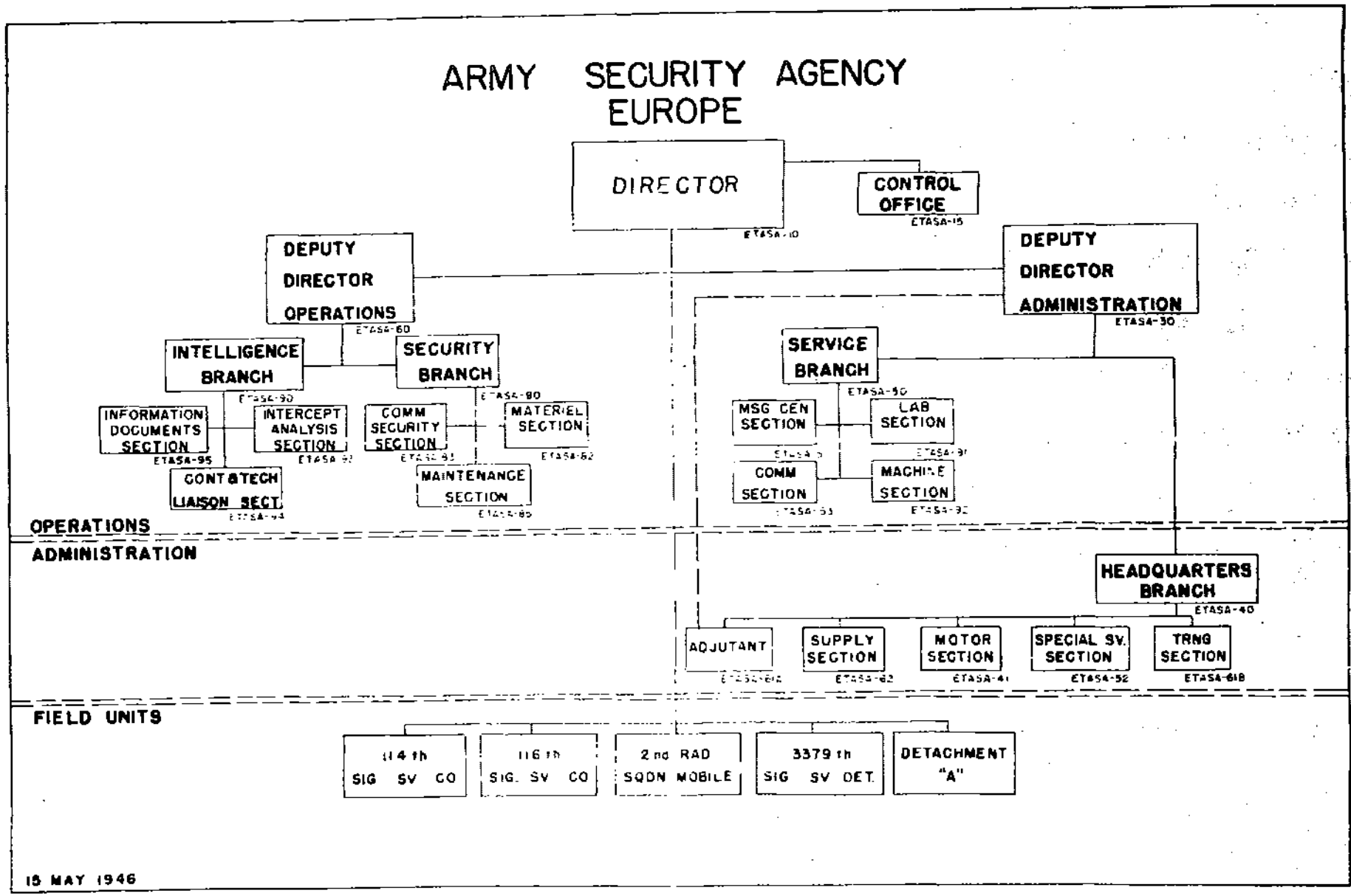
DISTRIBUTION: ASF. CG AAF. CGGN. OPD G-1, G-3, SASO

CM-OUT-89628 (May 46) DMG 2917[illegible] vh

~~SECRET~~

ID: 6579558

ARMY SECURITY AGENCY EUROPE



Number of Nets Monitored by Transmission Security Section

July 1945	18
August	15
September	12
October	11
November	8
December	6
January	0
February	0
March	0
April	0
May	7
June 1946	13

Traffic Analyzed by Cryptographic Security Section

Date	No. Units Submitting Traffic	No. Units Traffic Analyzed	Type of Traffic Analyzed SIGABA - M-209	
July	159	15	8	7
August	75	16	12	4
September	70	12	11	1
October	61	5	5	-
November	37	5	5	-
December	--	-	-	-

* The redeployment of personnel left one man in this section during the first week of December 1945. Operations were suspended, and as of 30 June 1946 had not been resumed.

Doc ID: 6579558

~~SECRET~~

Enc (3)

Recapitulation of traffic totals for September 1945 through February 1946:

MONTH	SER	HRS OF OPN	SERS IN OPN	SS TOTALS	TOTAL INTER Cos(daily)	TYPES OF REPS
Sept	114	24	5	370	1	Commercial
	116	14	7	116	3	Comm.,Fr.,Ger
	121	24	9	91	2	Comm.,Fr
	124	24	8	96	2	French
	129	24	-	2170	1	Commercial
	133	24	16	330	1	Comm.,Fr.
	6811	24	9	959	10	Commercial
Oct	116	24	6	294	4	Fr. Ger
	121	24	4	102	1	Fr, Comm.
	129	24	12	44	1	Comm. Ger
	6811	24	6	2565	11	Commercial
Nov	Det A	24	12	6056	16	Commercial
Dec	Det A	24	8	4421	13	Commercial
	115	24	-	1068	22	Czech, Hung. Russ. Ger Misc.
Jan	Det A	24	6	7094	9	Commercial
	118	24	-	550	24	Czech, Ger Russ, Yugo Misc
Feb	Det A	24	6	2188	8	Comm.
	118	24	4	174	2	Russ, Ger Czech, Misc

~~SECRET~~

DETACHMENT "A"

Intercept Results: 31 July 1945 - 31 December 1945

Circuit	Frequency	Nationality	Type	3/Figure	4/Letter	4/Figure	5/Figure	5/Letter	Plain Lang.	Misc.
	95	Portugese	Cm				1			
	81.7	Spanish	Cm		1			5	3	
	15300	French	Cm				3			
	112	French	Cm		4	297	179		598	5
	91.48	French	Cm			10	4		57	
	5290	French	Cm						2	
	90.9	French	Cm			34	29		174	4
	15548	French	Cm			21	1		20	
			Cm			23	297		609	
			Cm		4	12	69		207	2
			Cm		4	26	153		134	16
			Cm		32	123	42		299	10
			Cm	2	376	75	139		770	33
	9760	Russian	Cm			437	555		269	2
	8929	Russian	Cm			27	49		41	
	5285	Russian	Cm			86	78		58	
	4646	Russian	Cm			105	238		180	
	11111	Russian	Cm			1	7		1	
	6588	Russian	Cm			2	1		1	
	4710	Russian	Cm			4	2			
	87.2	Swedish	Cm			1	16		1	
	4395	Swedish	Cm				3		8	1
	11600	Swedish	Cm				8			
	10815	Swedish	Cm		3	31	71		580	9
	5742	Swedish	Cm						2	
	8950	Swedish	Cm				12		17	
	82.6	Swiss	Cm		12	102	199		1039	7
	95.85	Swiss	Cm		24	76	262		1067	16
	71	Swiss	Cm		243	47	80		641	2
	8665	Swiss	Cm			3	5		13	
	11625	Syrian	Cm		1					
	6720	German	Cm	5		40	122		347	4
	48	German	Cm				5			

Tab (A)

Intercept Results: 31 July 1945 - 31 December 1945 (Cont'd)

Circuit	Frequency	Nationality	Type	3/Figure	4/Letter	4/Figure	5/Figure	5/Letter	Plain Lang.	Misc.	
[redacted]	98.75	Belgian	Cm			4	38	128	1		
	5725	Danish	Cm				1	13			
	6538	Russian	Cm			1	1	2			
	11016	Russian	Cm			6	10	3			
	7550	Russian	Cm			1					
	10150	Russian	Cm			7	34	10			
	4712	Russian	Cm			8	22	1		1	
	13610	Russian	Cm			21	11	5			
				7	752		1703	2791	7139	112	TOTALS

PL 86-36/50 USC 3605
EO 3.3(h)(2)

Tab (A) (Cont'd)

DETACHMENT "A"

Intercept Results: 1 January 1946 - 30 June 1946

Circuit	Frequency	Nationality	Type	4/Letter	4/Figure	5/Figure	5/Letter	Plain Lang.	Misc.
	17045	Portugese	Cm			3		2	
	77.4	Iranian	Cm						
	9965	French	Cm						
	112	French	Cm			111	296	403	15
	104	French	Cm			18	184	202	1
	7885	French	Cm			2	4	2	
	91	French	Cm			83	77	338	8
			Cm		2		2	4	
			Cm		14	36	186	309	26
			Cm				3	1	
			Cm		1	6	8	41	
			Cm		101	9	25	104	19
			Cm			2	4	1	
			Cm	3		1	1	7	
			Cm	9			16	2	
	63.1	Dutch	Cm				21	39	2
	63.1	Hungarian	Cm			3		2	
	82.6	Swiss	Cm	18	14	70	188	740	1
	95.85	Swiss	Cm	106	14	71	326	647	33
	8888	Swiss	Cm	9		14	47	38	
	3986	Italian	Cm						
	9980	Norwegian	Cm				1	6	
	10326	Bulgarian	Cm			2	3		
	10983	Bulgarian	Cm	37		17	95	108	
	10032	Russian	Cm						
	6720	Czech	Cm	48		42	126	261	
	48	German	Cm					4	
	84	German	Cm					1	
	98.7	Bulgarian	Cm					6	
	108	Bulgarian	Cm				2		
	19262	Brazilian	Cm						
	5535	Russian	Cm			89	48	28	
	11016	Russian	Cm	200		214	357	256	3
	10236	Russian	Cm						
	12370	Russian	Cm	24		19	368	70	2
	10150	Russian	Cm			30	239	36	1

Tab (B)

Intercept Results: 1 January 1946 - 30 June 1946 (Cont'd)

Circuit	Frequency	Nationality	Type	4/Letter	4/Figure	5/Figure	5/Letter	Plain Lang.	Misc.
	4712	Russian	Cm			25	325	41	1
	10415	Russian	Cm			19	8	39	
	13610	Russian	Cm				12	1	
	9760	Russian	Cm			10	64	20	
	6924	Russian	Cm				8	7	
	5286	Russian	Cm			28	40	32	
	4646	Russian	Cm			26	75	44	
	11111	Russian	Cm			5	7	4	
	5840	Russian	Cm			9		4	
	10200	Russian	Cm	28		6	90	95	
	10100	Russian	Cm						
	6900	Russian	Cm	4		2	3		
	11002	Russian	Cm	7			3	4	
	4700	Swedish	Cm			33	27	10	
	11600	Swedish	Cm			15	67	19	
	10815	Swedish	Cm				7	11	
	11010	Swedish	Cm						
	12028	Swedish	Cm						
	8174	Swedish	Cm						
	13330	Swedish	Cm	2			4		
	8968	Swedish	Cm				1		
	9935	Greek	Cm	273		1	40	206	
	13670	Greek	Cm	97		30	161	118	
	8045	Turkish	Cm				1		
	8987	French	Cm	1			1		
	1553	Chinese	Cm	1					
	10849	Rumanian	Cm	6		52	26		
	8198	Yugoslavian	Cm	2		4	9		
				875	145	1049	3526	4347	112 TOTALS

PL 86-36/50 USC 3605
EO 3.3(h)(2)

COPY

As each such action is completed transfer unit to Headquarters, AEA, Pacific. Inform War Department of effective date of each reorganization, activation and transfer. Action on transfer of AAF Radio Security sections will be taken by War Department at later date. Any recommendations for modification of team compositions of units should be forwarded.

End

CM-OUT-85016 (Nov 45)

SECRET

~~SECRET~~

COPY

GENERAL HEADQUARTERS
UNITED STATES ARMY FORCES, PACIFIC

A. P. O. 500

30 November 1945

AG 321 (30 Nov 45)GO FWS/dwk

SUBJECT: Reorganization of the 111th and 126th Signal Service Companies.

TO : Commanding General, United States Army Forces Western Pacific, APO 707.

1. Pursuant to authority War Department radio WAR 85016, 25 November 1945, it is desired that you reorganize the 111th and 126th Signal Service Companies with appropriate columns of T/O & E 11-500, 22 September 1944, as amended by changes 1, 2 and 3, 12 February, 31 March and 23 June 1945, respectively. Effective date of reorganization, 1 December 1945.

111TH SIGNAL SERVICE COMPANY

Element	T/O & E 11-500, 22 Sep 44, as changed Column	Authorized Strength OFF	EM
1 Team	AC	2	9
1 Team	AB	1	4
1 Team	AJ		11
1 Team	AF		4
1 Team	AL		2
5 Teams (less 1 Lt)	IT	4	150
1 Team	GT		11
1 Team	GK	1	17
1 Team	GJ		5
4 Teams	EE		20
1 Team	IF	1	4
		9	241

126TH SIGNAL SERVICE COMPANY

1 Team	AC	2	9
1 Team	AB	1	4
1 Team	AJ		11
1 Team	AL		2
4 Teams (less 2 Lts)	IS	2	120
1 Team (less Capt)	IJ	1	3
4 Teams	IV		16

~~SECRET~~

COPY

Ltr AG 321 (30 Nov 45)GC, subj: "Reorganization of the 111th and 126th Signal Service Companies", dtd 30 Nov 45, CONT'D

Element	Column	OFF	EM
5 Teams	EB		25
1 Team	IP	1	4
1 Team	DA		5
1 Team	GC		3
1 Team	GK	1	17
1 Team	GT		11
1 Team	IA	1	13
		9	248

2. a. Personnel required as a result of this action will be provided from sources under your control.

b. No personnel will be reduced in grade as a result of this action. Excess in grades resulting therefrom will be absorbed through normal attrition and the operation of the theater replacement system.

3. a. Table of Organization and Equipment 11-500, as amended applies for organizational equipment.

b. Equipment required and not available will be furnished in accordance with normal supply procedure.

4. Upon reorganization, these units will be reassigned to the Army Security Agency, Pacific by this headquarters.

5. Direct communication is authorized.

6. When the action directed herein has been accomplished, a report indicating the date and station thereof will be submitted to this headquarters.

7. Obligate the appropriate allotment citing FIGA serial number assigned to your command to the extent necessary in accordance with Section III, Circular No. 179, War Department, 1945 as amended.

By Command of General MacARTHUR:

[illegible]
Capt, A. G. D.
Asst. A. G.

(Mailed 1700 Dec 1 '45 43 GL)

COPY

SECRET

GENERAL HEADQUARTERS
UNITED STATES ARMY FORCES, PACIFIC

A. P. O. 500

30 November 1945

AG 321 (30 Nov 45) GC [illegible]

SUBJECT: Reorganization of the 1st Radio Squadron Mobile.

TO : Commanding General, Far East Air Forces, APO 925.

1. Pursuant to authority War Department radio [illegible], 25 November 1945, it is desired that you reorganize the 1st Radio Squadron Mobile with appropriate columns of T/O & E 1-1027, 19 January 1945. Effective date of reorganization, 1 December 1945.

1ST RADIO SQUADRON, MOBILE	T/O & E 1-1027 19 January 1945 Column	Authorized Strength OFF	EM
1 Team	5	2	8
1 Team	6	1	13
1 Team	7	1	7
1 Team	8	1	5
1 Team	9	1	34
1 Team	11	3	79
1 Team	12	2	66
1 Team	15	1	2
1 Team	17	1	29
1 Team	19	1	13
1 Team	22		5
2 Teams	24		12
1 Team	26	3	12
		17	285

2. a. Personnel required as a result of this action will be provided from sources under your control.

b. No personnel will be reduced in grade as a result of this action. Excess in grades resulting therefrom will be absorbed through normal attrition and the operation of the theater replacement system.

SECRET

SECRET

COPY

Ltr AG 321 (30 Nov 45) GC s[illegible]: "Reorganization of the 1st Radio Squadron Mobile" dated 30 November 1945 (cont'd).

3. a. Table of Organization and Equipment I-1027 applies for organizational equipment.

b. Equipment required and not available will be furnished in accordance with normal supply procedure.

4. Upon reorganization, this unit will be reassigned to the Army Security Agency, Pacific by this headquarters.

5. Direct communication is authorized.

6. When the actions directed herein have been accomplished, a report indicating the date and station thereof will be submitted to this headquarters.

7. Obligate the appropriate allotment citing FMGA serial number assigned to your command to the extent necessary in accordance with section III, Circular No. 178, War Department 1945 as amended.

By Command of General MacARTHUR:

BILLY D. GOLDBERG
Capt, A. G. D.
Asst. A. G.

(Mailed 1540 Dec 1 '45 AG GHQ)

Copy to:
G-4, C Sig O, Army Security Agency, Pacific, AG MRU, GHQ

COPY

SECRET

COPY

GENERAL HEADQUARTERS
UNITED STATES ARMY FORCES, PACIFIC

APO 500
5 December 1945

AG 321 (5 Dec 45) GC FWS/cm

SUBJECT: Activation of the 3377th and 3378th Signal Service Detachments.

TO : Commanding General, United States Army Forces, Western Pacific, APO 707.

1. Pursuant to authority contained in War Department radio WX 85015, 25 November 1945, it is desired that you activate the 3377th and 3378th Signal Service Detachments with appropriate columns of T/O & E 11-500, 22 September 1944, as amended by changes 1, 2 and 3, 12 February, 21 March and 23 June 1945, respectively.

3377th Signal Service Detachment

Element	T/O & E 11-500, 22 Sep 44 as changed Column	Authorized Strength OFF	EM
1 Team	IP	1	4
1 Team	HB		5
1 Team	IS	1	30
	Total	2	39

(SSN 756 should be substituted for all SSN 739 per verbal authority, Major Ewit., G-3(WESPAC notified by him)

3378th Signal Service Detachment

10 Teams	IU		50
1 Team	IV	2	8
	Total	2	58

2. a. Personnel required for this action will be provided from sources under your control.

b. No personnel will be reduced in grade as a result of this action.

3. a. Table of Organization and Equipment 11-500 as amended applies for organizational equipment.

b. Equipment required and not available will be furnished in accordance with normal supply procedure.

SECRET

COPY

AG 321 (5 Dec 45)GC

4. Upon activation, these units will be reassigned to the Army Security Agency, Pacific by this headquarters.

5. The 33 7th and 307th Signal Service Detachments will be activated at the earliest practicable date. If action as directed cannot be effected within sixty (60) days, it is desired that a justification therefor, be forwarded to reach this headquarters not later than 5 January 1946.

6. When the action directed herein has been accomplished, a report indicating the date and station thereof will be submitted to this headquarters.

7. Obligate the appropriate allotment citing FDC serial number assigned to you concern to the extent necessary in accordance with Section III, Circular No. 138, War Department 1945, as amended.

By command of General MacARTHUR:

Billy B. Goldberg
Capt, A. G. D.
Asst, A. G.
(Mailed 1250 Dec 6 '45 AG GHQ)

Doc ID: 6579558

COPY

HEADQUARTERS
ARMY SECURITY AGENCY
PACIFIC

APO 500
6 May 1946

GENERAL ORDERS)
:
No. 3)

1. Effective 2400 hours 5 May 1946, Headquarters, Army Security Agency, Pacific closes at APO 35[illegible] Manila, P. I. and opens 0001 hours 6 May 1946 at APO 500 Tokyo, Japan.

2. Effective 0001 hours 6 May 1946, Headquarters, Army Security Agency, Pacific (Administrative) opens at APO 35[illegible], Manila, P. I.

BY ORDER OF COLONEL COLLINS:

WILLIAM G. THOMAS
1st Lt., Signal Corps
Acting Adjutant

OFFICIAL:

/s/ William G. Thomas
WILLIAM G. THOMAS
1st Lt., Signal Corps
Acting Adjutant

COPY

RESTRICTED

GENERAL HEADQUARTERS
UNITED STATES ARMY FORCES, PACIFIC

APO 500

22 June 1946

AG 370.5 (22 June 46) GC

SUBJECT: Assignment of Units (241)

E X T R A C T

* * * * * * *

1. Effective upon arrival in Tokyo, Japan, Headquarters Army Security Agency (Administration) is relieved from attachment to United States Army Forces, Western Pacific and reverts to assignment to Headquarters Army Security Agency, Pacific. Direct communication between the commands concerned is authorized.

2. Effective upon arrival in Tokyo, Japan, the 2277 and 2278 Signal Service Detachments are relieved from attachment to United States Army Forces, Western Pacific and are attached to Headquarters and Service Group, General Headquarters, United States Army Forces, Pacific, except for operations and training, promotion, transfer and assignment of personnel, which functions remain under direct control of Army Security Agency, Pacific.

* * * * *

By command of General [redacted]:

/s/ George R. Connor
GEORGE R. CONNOR
Colonel, A. G. D.
Asst. Adjutant General.

RESTRICTED

[redacted]

UNITS OF ARMY SECURITY AGENCY, PACIFIC

30 JUNE 1946

Unit	Location	Strength Off	EM	
Hq ASAPAC	Tokyo, Japan	10	8	
1st Radio Squadron Mobile	Tachagawa, Japan	7	20	
111th Sig Sv Co	San Miguel, P. I.	3	30	
126th Sig Sv Co	Kyoto, Honshu, Japan	3	54	
1st Op Plat, 126th Sig Sv Co	Seoul, Korea	1	8	
3377th Sig Sv Det	Tokyo, Japan	1	0	
3378th Sig Sv Det	Tokyo, Japan	1	0	
MIDPAC Det ASAPAC	Ft Shafter, T.H.	3	5	
WESPAC Det ASAPAC	Manila, P. I.	14	75	
China Det ASAPAC	Shanghai	1	1	(WAC)
5th Det 2d Sig*	Helemano, Oahu, T.H.	2	18	
9th Det 2nd Sig*	Manila (Las Pinas), P.I.	6	24	

*Under operational control of Hq AGA, War Department.

[redacted]

[redacted]

205

SECRET

HEADQUARTERS
ARMY SECURITY AGENCY
PACIFIC

G.P.O. 358
26 February 1946

GENERAL ORDERS)
:
NUMBER.....2)

1. Activation of the Middle Pacific Detachment, Army Security Agency, Pacific, with an authorized strength of four (4) officers and seven (7) enlisted men, is announced, effective 21 January 1946, with station at APO 959.

2. Major [illegible] Y. Whitehead, 0-403662, Signal Corps, is designated commanding officer.

AUTHORITY: Telegram WX 35016 CSM 25 Nov 1945

By Order of Colonel [illegible]:

[illegible] H. CHAPMAN
Capt, Signal Corps
Adjutant

DISTRIBUTION:

[illegible].....2
[illegible].....4
[illegible].....2
[illegible].....2
[illegible].....1
[illegible].....1
[illegible].....1

SECRET

APPENDIX "B"

THE WHITE HOUSE
WASHINGTON

May 10, 1944

My dear Admiral Leahy:

I believe steps need to be taken which will afford full assurance that communications to and from the various Federal departments and agencies do not disclose or become a source of information of value to the enemy. The Joint Chiefs of Staff would seem to be in the best position to be of assistance in this regard.

Accordingly, I wish that the Joint Chiefs of Staff would proceed to make a survey of all cryptographic systems and related procedures now in use or proposed to be used by any Federal Department or agency, utilizing in this survey the services and facilities of the Joint Communications Board. The survey should consist of an examination of the codes, ciphers, cipher devices, cipher machines, and other equipment in use for secret or confidential communications; of all procedures relating thereto; of all methods of handling such communications; of the adequacy of cryptographic personnel; and, generally, of the means and equipment utilized in connection with the physical security of such communications.

It is my desire that all Federal departments and agencies concerned cooperate fully with the Joint Chiefs of Staff and their designated representatives in this connection. These departments and agencies should furnish the Joint Chiefs of Staff and their representatives any information pertinent to the survey and should also permit access by the Joint Chiefs and their representatives to any records, systems, devices, and equipment involved in the survey. I wish you would forward to each such department or agency, on my behalf, a copy of this letter.

At the conclusion of the survey and at such earlier times as the Joint Chiefs of Staff may deem necessary, I should like to have them submit to me their findings and recommendations.

Sincerely yours,

/s/ Franklin D. Roosevelt

- - - - -

~~SECRET~~

COPY NO. 14

J.C.B. 32/72

4 January 1945

JOINT COMMUNICATIONS BOARD

SECURITY IN HANDLING CODED MESSAGES (IN NON-MILITARY DEPARTMENTS OF THE U.S. GOVERNMENT)

Note by the Secretary

1. At its 19 Dec 44 meeting, the Joint Communications Board approved the recommendations contained in J.C.B. 32/77, subject to re-editing by the J.C.B. Secretary and the J.C.B. Communications Secretary.

2. On 20 Dec 44, the Secretary forwarded the report, with changes made by the J.C.B. Secretary and the J.C.S. Communications Secretary, to the Secretary, Joint Chiefs of Staff.

3. On 1 Jan 45, the Secretary, Joint Chiefs of Staff, forwarded the letter to the President, in form as attached hereto.

4. The foregoing is for the information and files of the members of the J.C.B.

G. B. EVERS

Secretary

Doc ID: 6579558

SECRET

THE JOINT CHIEFS OF STAFF
WASHINGTON
25 DC

1 January 1945

MEMORANDUM FOR THE PRESIDENT:

In compliance with your letter of May 10, 1944, the Joint Chiefs of Staff have made a complete survey of the security of the cryptographic systems and related procedures in use or proposed to be used by the various Federal departments and agencies. The survey included consideration of the adequacy of cryptographic aids, and the training, knowledge and efficiency of personnel, physical security, and transmission security relating to cryptographic communications.

Upon the completion of the survey of each agency, the Joint Chiefs of Staff immediately recommended to it appropriate corrective measures within the limits of the facilities available. Such piece-meal corrective measures by individual agencies do not permanently insure the high standards necessary for protection of the national security and interest. Moreover, there exists no over-all coordination among, or supervision of, the cryptographic systems and related procedures in use by the various agencies, with the result that the practices of one agency may undermine the communications security of another agency.

The present situation is not conducive to the Security of governmental communications. The survey indicates that there may be a need for

a. Continuous over-all coordination, supervision and control;

b. The establishment and maintenance of high and uniform security standards; and

c. An extensive program of education and training.

The Joint Chiefs of Staff are therefore continuing their study of the data obtained during the survey for the purpose of preparing and submitting final and specific recommendations as to the possible desirability of creating a permanent supervisory agency with authority to achieve the highest possible standards of security of governmental communications.

For the Joint Chiefs of Staff:

(Signed)

WILLIAM D. LEAHY,
Fleet Admiral, U.S. Navy,
Chief of Staff to the
Commander in Chief of the Army and Navy.

SECRET

J.C.S. 32/78

APPENDIX B

EXECUTIVE ORDER

Creating the Cryptographic Security Policy Board and Defining its Functions and Duties.

WHEREAS communications of the Federal Government, particularly those relative to diplomatic and military activities affecting the national security and interest, must be maintained inviolate; and

WHEREAS the State, War and Navy Departments have the major interest in and responsibility for efficient coordination and supervision of the security of all cryptographic systems and related procedures throughout the whole Federal Government; and

WHEREAS the inviolability of such communications can be maintained only through use of cryptographic systems and related procedures having a high degree of security and through the establishment and enforcement of high and uniform security standards;

NOW, THEREFORE, by virtue of the authority invested in me as President of the United States and as Commander-in-Chief, it is ordered as follows:

1. There is hereby created the "Cryptographic Security Policy Board", hereinafter called the Board, consisting of the Secretaries of State, War, and Navy, charged with the responsibility for the efficient coordination and supervision of all cryptographic systems and related procedures of the Federal departments and agencies. The Secretary of State shall act as Chairman of the Board.

2. The functions of the Board shall be, with the requirements of national security and defense as a primary consideration: (a) to study the cryptographic systems and related procedures of the various Federal departments and agencies, and make periodic inspections and surveys thereof; (b) to determine and establish such security standards and policies as will achieve the maximum of security of governmental communications; and (c) to promulgate such directives as may be necessary to implement its standards and policies.

3. The Board shall establish a Cryptographic Security Coordinating Committee, consisting of three members, one appointed by the Secretary of State, one a general officer appointed by the Secretary of War, and one a flag

officer appointed by the Secretary of the Navy. Such other personnel, as may be required to assist the Board or this Committee in the performance of their functions, may be detailed from those departments. The Board may delegate to the Committee such of its functions and powers as it shall deem necessary or desirable.

4. The Board shall appoint such committees as may be necessary to carry out its functions and to provide for continuing studies and for contact with other government departments and agencies.

5. Except as otherwise instructed by the Board, committees appointed thereby shall have no power to make final disposition of any matter presented to them by the Board for study, but they shall express by written report their findings and recommendation to the Board via the Coordinating Committee.

6. The Board and the committees shall call for consultation such representatives of other government departments and agencies as may be deemed advisable in obtaining full knowledge of the situation being studied, to the end that the needs of all may be considered and provided for in so far as possible. Other government agencies are directed to cooperate in providing assistance required by the Board in its studies and to comply with directives promulgated by or on behalf of the Board.

7. No department or agency shall be required to make available to the Board for use by any other department or agency any cryptographic aid or device, the restricted or exclusive use of which it considers essential to the proper discharge of its duties in the national interest. Nor shall any department or agency be required to disclose the contents of any official communication concerning its activities if, in the opinion of the head of such department or agency, the disclosure would be contrary to the national interest.

WDGSS-60 11 March 1946

SUBJECT: Army-Navy Coordination of Research, Development, and Procurement of Cryptographic Equipment

TO: Director, Naval Communications
Navy Department
Washington, D. C.

1. Joint experience in this war has proved the desirability and necessity for the use, so far as possible, of the same cryptographic equipment within both services. New and important developments in this field are just on the horizon and it is believed that the principle of common use can and should be much more fully exploited than it has been to date. In view of the common interest of the Army and the Navy in the research, development, and procurement of cryptographic equipment, and because of the paralleling contractual relations which each service has with commercial research, development, and production organizations, it is proposed that there now be established an Army-Navy Cryptographic Research, Development, and Procurement Coordination Committee.

2. The purposes and functions of such a committee would be to prevent unnecessary duplication of work, by providing a means for a continuous and broad exchange of information relating to new types of cryptographic equipment, and to insure that a maximum mutual utilization of the experiences and facilities of both services in this field be achieved. A specific function of the committee would be the formulation of recommendations as to which service should undertake primary responsibility in the conduct of specific projects of joint interest in the research, development, or procurement of new cryptographic devices, including ciphony and cifax. It would not be a function of the committee to hamper either service in the undertaking of such research or development as might be dictated by operational requirements, but merely to insure that each service has a full opportunity to present its views and requirements in time to influence the development and to insure that the results are available to all concerned.

3. It is recommended that this committee operate independently of existing boards or committees.

4. If this proposal meets with your approval, it is suggested that you designate an officer to meet with the Chief, Army Security Agency for the purpose of formulating specific recommendations for the establishment, operation, and functioning of the proposed committee.

HAROLD G. HAYES
Colonel, Signal Corps
Acting Chief, Army Security Agency

Doc ID: 6579558

In reply refer to Initials and No.

~~CONFIDENTIAL~~
Op-20-Y/wsr
Serial 015711F20
(SC) A7-3

NAVY DEPARTMENT
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
WASHINGTON 25, D. C.

~~CONFIDENTIAL~~

8 APR 1946

From: Chief of Naval Communications.
To: Chief, Army Security Agency.

Subj: Army-Navy Coordination of Research, Development, and Procurement of Cryptographic Equipment.

Ref: (a) Acting Chief, Army Security Agency letter of 11 March 1946.

1. Reference (a) pointed out the U. S. Army views on the desirability and necessity for the use, so far as possible, of the same cryptographic equipment within both the Army and Navy, and recommended the establishment of a Joint Cryptographic Research, Development and Procurement Coordinating Committee. The Chief of Naval Communications concurs in this recommendation.

2. It is understood that this committee would function for the purpose of the broad exchange of information concerning cryptographic research, to prevent duplication of effort in this field and to allocate to either service the primary responsibility in the conduct of specific projects, including procurement. It is further understood that this committee would in no way prevent the development of any cryptographic system for exclusive use of either service as might be dictated by the peculiarities of the communication system or operational requirements of each service.

3. Captain T. A. Smith, U.S.N., has been designated to meet with representatives of the Chief, Army Security Agency, for the purpose of formulating specific recommendations for the establishment, operation, and functioning of the proposed committee. It is suggested that the first meeting be held in Room 2537 Main Navy Building at 1400, on 15 April 1946. If this date is satisfactory, please confirm by phoning Captain Smith on Ext. 5077.

E. E. Stone

~~CONFIDENTIAL~~

WDGSS-23

20 May 1946

SUBJECT: Army-Navy Coordination of Research, Development and Procurement of Cryptographic Equipment

TO: Chief of Naval Communications
Navy Department
Washington, D. C.

1. Pursuant to a recent exchange of letters, the first meeting of the Joint Cryptographic Research, Development and Procurement Coordinating Committee was held on 22 April 1946. Items of considerable interest to both services were developed and it is believed that the committee will prove to be mutually beneficial.

2. It was anticipated by this Agency that the committee would provide for a completely open and free exchange of all information concerning research, development and procurement of all cryptographic equipment in order to prevent any duplication of effort. However, this policy has not met with complete agreement of the Naval members in that they desire that either service may withhold information regarding development which the particular service considers to have only intra-service application. The Army Security Agency regrets the limitations set up by the Naval representatives but accepts this policy in order that as much coordination as is possible of the research and development programs of the two services may be obtained.

3. At the first meeting of the committee the Navy members regarded it as unnecessary to formalize the committee, to establish its functions and scope of responsibility in detail, or to schedule regular meetings. The Army members, however, deemed it desirable to establish the committee on a formal basis paralleling to some extent the committee known as SIGINTCOC. The committee thereupon agreed to refer the matter of organization to higher authority for decision. It is believed that the potentialities for useful work will be considerably enhanced by formally organizing the committee, establishing its charter in definite terms, providing for a secretariat, and for certain sub-committees. There is submitted herewith a proposed Organizational Bulletin covering the foregoing points. Your comments and/or recommendations on this proposed bulletin would be much appreciated.

1 Incl
Organizational Bulletin

HAROLD G. HAYES
Colonel, Signal Corps
Chief, Army Security Agency

See letter of 10 June 46

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

20 May 1946

ORGANIZATIONAL BULLETIN:

1. The Committee will be composed of a main committee and several working committees. The main committee will be composed of not more than four members from each service.

(The ASA members will consist of the Chief or Deputy Chief, ASA, the Director of Communications Research, the Chief, Security Division, and the Chief, Research and Development Division.)

The name of the committee will be: Army-Navy Cryptographic Equipment Coordinating Committee (ANCECC) or similar name.

2. The functions and responsibilities of ANCECC will be as mutually agreed between the Chief, Army Security Agency and the Chief of Naval Communications.

3. At least three sub-committees will be formed as follows:

a. A Ciphony and Cifax Sub-committee (ANCECCC), which will have cognizance over matters pertaining to research, development, and security studies of ciphony and cifax equipment. It will be limited to three members from each service.

(The ASA members will consist of the Chief, Ciphony and Cifax Branch, a member from Maintenance Branch, and a member from Methods Branch.)

b. A Cipher Machine Sub-committee (ANCECM), which will have cognizance over matters pertaining to research, development, and security studies of cipher machines which involve literal text. It will be limited to three members from each service.

~~CONFIDENTIAL~~

(The ASA members will consist of the Chief, Electronics and Electro-Mechanics Branch, a member from Maintenance Branch, and a member from Methods Branch.)

c. A Procurement Sub-committee (ANCPRO), which will have cognizance over matters pertaining to the joint procurement of all types of cryptographic equipment. It will be limited to three members from each service.

(The ASA members will consist of one member each from Research and Development Division, Supply Branch, and Fiscal Section, ASA Staff.)

4. Other sub-committees will be appointed as desired by ANCRECC.

5. Regularly scheduled meetings of ANCRECC and its sub-committees will be held once each month at each of the two services alternately. The Chairman of each meeting will be the senior representative of the host station at which the meeting is held.

6. A Secretariat will be appointed, to consist of one additional junior member from each service, whose function will be to keep a continuous inventory of all items on the agenda of ANCRECC; to keep and write up the minutes of ANCRECC; to assign specific tasks to the particular sub-committees; to coordinate the exchange of correspondence between ANCRECC and its sub-committees; and to establish a file of minutes of the sub-committees, bringing pertinent matters to the attention of ANCRECC when necessary.

(Note: The Secretariat will not be responsible for the minutes of the sub-committees. The latter will be responsible for the keeping of their own minutes and the forwarding of same to the Secretariat.)

~~CONFIDENTIAL~~

COPY

NAVY DEPARTMENT
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
Washington 25, D. C.

~~CONFIDENTIAL~~
Op-20-&/jhb
Serial 015723P20
(SC) A8-6

10 June 1946

From: Chief of Naval Communications.
To: Chief, Army Security Agency.

Subj: Army-Navy Coordination of Research, Development and Procurement of Cryptographic Equipment.

Ref: (a) Your Conf. ltr. WDGSS-23 of 20 May 1946, same subject.

1. In reference (a) it was recommended that a committee be established to be known as the Army-Navy Cryptographic Equipment Coordinating Committee (ANCRECC). This committee would be a means of facilitating exchange of cryptographic information, and have sub-committee with cognizance as follows:

a. Ciphony-Cifax (ANPHAX)
b. Cipher Machines (ANCIM)
c. Procurement (ANPRO)

2. The Chief of Naval Communications concurs in the recommendation, and appoints the following committee members:

ANCRECC

Rear Admiral E. E. Stone - Chief of Naval Communications (Alternate, Capt. C. F. Horne-Deputy Chief of Naval Communications.)

Capt. L. F. Safford - Assistant Chief of Naval Communications for Cryptographic Research.

Capt. T. A. Smith - Assistant Chief of Naval Communications for Security.

ANPHAX

Capt. L. F. Safford

Mr. J. J. Kelly - In charge of Automatics Subsection, Communication Equipment Section, Bureau of ships.

~~CONFIDENTIAL~~

COPY

~~CONFIDENTIAL~~ ~~CONFIDENTIAL~~
Op-20-Y-jhb
Serial 015723P20
(SC) A8-6

Sub: Army-Navy Coordination of Research, Development and Procurement of Cryptographic Equipment.,

ANPHAX - Continued

Lt. Comdr. J. C. Hargreaves - OinC Machine Cipher Subsection, Cryptographic Section, Division of Naval Communications.

ANCIM

Capt. L. F. Safford.
Capt. T. A. Smith (Alternate, Lt. Comdr. J. C. Hargreave

Comdr. D. W. Seiler - Officer in Charge, Naval Code and Signal Laboratory.

ANPRO

Capt. T. A. Smith

Capt. A. M. Patterson

Comdr. G. Hunter - OinC Special Applications Section, Bureau of Ships.

3. Referring to paragraph (2) of reference (a), some clarification appears to be necessary. In general, the Chief of Naval Communication agrees with the Chief of the Army Security Agency that there should be a completely open and free exchange of all information concerning research, development, and procurement of all cryptographic equipment. However, the Chief of Naval Communications feels that one exception probably should be made applicable to either Army or Navy. The intention is to cover the development of any system or device which either Service desires to reserve for use by own High Command (class 7 Navy).

4. To cover such materiel, and, especially to obtain the utmost Security, knowledge of any reservation for own Service High Command use need be made known only by the reserving Service to the Chief of the Army Security Agency or the Chief of Naval Communications, as the case may be, and not to others of the opposite Service without prior approval of the reserving Service. Thus, if either Service makes such a reservation it should be incumbent upon that Service to provide the system or device by loan agreement to the other Service at

~~CONFIDENTIAL~~
Op-20-Y/jhb
Serial 015723P20
(SC) A8-6

such times when it might become desirable or necessary to employ the system or device for joint High Command communications. Furthermore, it should be incumbent upon the other Service strictly to observe such Security rules pertaining to this system or device as the lendi Service prescribes for own Service use. You may recall that the Security issue was never settled to the satisfaction of either the Army or the Navy in the case of the ECM - the disagreement devolving about the question of officer versus enlisted and civilian operators. If any such reserved system or device should later be made available for more extensive use than High Command within the reserving Servic it should be removed from reserved status and the other Service so advised. This is the only limitation the Chief of Naval Communications would propose initially.

5. If the Chief of Army Security Agency feels that there is now a basis for essential agreement, it is proposed that ANCRECC (less the two senior Army and Navy members) prepare a mutually acceptable formal agreement which can then be approved at high level. The proposed formal agreement might, if the Army concurs, be presented to the JCS for approval via the JCB.

6. As a part of the formal agreement, I propose that a statement be included somewhat as follows:

> "The free exchange of information and equipment shall be contingent upon its use in accordance with mutually agreeable Security regulations. Any special Security measure prescribed by the Service making the information or equipment available will be strictly observed by the Service receiving such information or equipment."

7. The Chief of Naval Communications will appreciate receiving the Army's comments and suggestions on the above, and suggests proceeding on the basis where there is already agreement in order to attain the maximum practicable joint coordination pending approval of a formal agreement.

/s/ E. E. Stone

Earl W. Stone

~~CONFIDENTIAL~~

WDGAS-23

20 June 1946

SUBJECT: Army-Navy Coordination of Research, Development and Procurement of Cryptographic Equipment

TO: Chief of Naval Communications
Navy Department
Washington 25, D. C.

1. The Chief, Army Security Agency, acknowledges receipt of letter dated 10 June 1946 from the Chief of Naval Communications, and is pleased that agreement has been reached to establish practical arrangements to effect the desired coordination.

2. The Army members will be:

ANCRECC

Chief, Army Security Agency - Colonel H. C. Mayes
(Alternate: Deputy Chief, Army Security Agency - Colonel C. A. Bicher)

Director of Communications Research - Mr. William F. Friedman
(Alternate: Assistant Director of Communications Research - Mr. Mark Rhoads)

Chief of Research and Development Division - Dr. Solomon Kullback
(Alternate: Assistant Chief of Research and Development Division - Mr. Leo Rosen)

Chief of Security Division - Dr. Abraham Sinkov
(Alternate: Assistant Chief of Security Division - Lt. Colonel H. L. Clark)

ANPEAX

Chief of Research and Development Division - Dr. Solomon Kullback
(Alternate: Deputy Chief of Research and Development - Mr. Leo Rosen)

Chief of Security Division - Dr. Abraham Sinkov
(Alternate: Chief, Methods Branch - Mr. J. H. Douglas)

Chief of Ciphony and Cifax Branch - Mr. C. C. Wright
(Alternate: Chief, Maintenance Branch - Major George L. Sampson

Cy for [illegible]14

~~CONFIDENTIAL~~

ANCIB

Chief of Research and Development Division-Dr. Solomon Kullback
(Alternate: Deputy Chief of Research and Development Division - Mr. Leo Rosen)

Chief of Security Division - Dr. Abraham Sinkov
(Alternate: Chief of Methods Branch - Mr. J. H. Douglas)

Director of Communications Research - Mr. William F. Friedman
(Alternate: Assistant Director of Communications Research - Mr. Mark Rhoads)

ANPRO

Chief, Materiel Section - Major Jack N. Faulds
(Alternate: Assistant Chief, Materiel Section - Major James E. Wood)

Chief, Technical Staff, Security Division - Capt. W. C. Washcoe
(Alternate: Chief, Maintenance Branch - Major George L. Sampson)

Chief, Supply Branch - Captain Samuel L. Johns
(Alternate: Executive Officer, Supply Branch - Captain Henry P. Cassidy)

3. Referring to Paragraph 3 of your letter, the Chief, Army Security Agency appreciates the desirability of providing for an exception to the general rule that there will be a completely open and free exchange of all information concerning research, development, and procurement of all cryptographic equipment. He concurs in the statement that the intention of the exception is to cover the development of any system or device which either Service desires to reserve for use by its own High Command (Class 7, Navy and its corresponding category in Army).

4. Reference Paragraph 4 of your letter, the Chief, Army Security Agency concurs in the basic principles set forth to cover the manner in which the exception noted in Paragraph 3 will be treated in the formal agreement to be prepared.

5. The Chief, Army Security Agency in stating his foregoing concurrences also feels that there is now a basis for essential agreement and proposes that a written agreement be prepared as soon as possible. However, it is felt that if an agreement were submitted for approval of the Joint Chiefs of Staff, it would not be favorably considered in view of the possible conflict in jurisdiction between ANCRECC, with its sub-committees, and certain committees of the Joint Communications Board. The Chief, Army Security Agency believes that placing ANCRECC under or within the framework of the Joint Chiefs of Staff organization would bring about an increase in its membership and definitely limit the scope of what might be accomplished, since full and frank discussions of cryptographic matters requiring high security could not

be held. It has been the experience of the Army Security Agency that JCB committees generally embrace a wider membership than is advisable when dealing with certain security matters.

6. The wording of the statement proposed in Paragraph 6 is satisfactory to the Chief, Army Security Agency, exactly as given.

7. The Army concurs in the suggestion to proceed immediately to hold meetings on an informal basis pending approval of the written agreement, and suggests that the first informal meeting of AFCRECC take place at a time and place to be set by telephone conversation soon after receipt of this letter. The purpose of this meeting will be to prepare the draft of the written agreement, arrange for secretariat, schedule, meeting dates of sub-committees, et

HAROLD G. HAYES
Colonel, Signal Corps
Chief, Army Security Agency

~~CONFIDENTIAL~~

Agreement Establishing the Army-Navy
Crypto-equipment Coordinating Committee

1. In order to expedite research, development, manufacture and procurement of crypto-equipment, and to obtain maximum benefit from common effort in this field, there is established a committee to be known as the Army-Navy Crypto-equipment Coordinating Committee (ANCrECC) to facilitate the exchange of information between the two services in these matters.

2. The membership of this committee shall be as follows:

For the Army

Chief, Army Security Agency
Director of Communications Research
Chief of Research and Development Division
Chief of Security Division

For the Navy

Chief of Naval Communications
Assistant Chief of Naval Communications for Cryptographic Research
Assistant Chief of Naval Communications for Cryptographic Aids
Assistant Chief of Naval Communications for Communication Security.

3. There shall be three subcommittees of ANCrECC, as follows:

(a) Ciphony-Cifax Sub-Committee (ANPHAX)
(b) Cipher Machine Sub-Committee (ANCIM)
(c) Procurement Sub-Committee (ANPRO)

4. Membership of these sub-committees shall be:

ANPHAX

For the Army

Chief of Research and Development Division
Chief of Security Division
Chief of Ciphony and Ciphax Branch.

AS-14, 334 ANPEC

ARMAY (con't)

For the Navy

Assistant Chief of Naval Communications for Cryptographic Research
Chief of the Automatics Sub-Section, Communicati Equipment Section, Bureau of Ships
Officer-in-Charge Machine Cipher Sub-Section, Cryptographic Section, Division of Naval Communications.

ARGYLE

For the Army

Chief of Research and Development Division
Chief of Security Division
Director of Communications Research.

For the Navy

Assistant Chief of Naval Communications for Cryptographic Research
Assistant Chief of Naval Communications for Cryptographic Aids
Officer-in-Charge, Naval Code and Signal Laboratory.

ARPHID

For the Army

Chief, Materiel Section
Chief, Technical Staff, Security Division
Chief, Supply Branch

For the Navy

Assistant Chief of Naval Communications for Cryptographic Aids
Assistant Chief of Naval Communications for Registered Publications
Officer-in-Charge, Special Applications Section, Bureau of Ships.

D: 6579558

5. Alternate members of any of the foregoing committees or sub-committees may be designated for the Army by the Chief of the Army Security Agency, and for the Navy by the Chief of Naval Communications.

6. The secretariat of AFSAC shall be composed of one representative each of the Army and Navy, appointed respectively by the Chief of the Army Security Agency and the Chief of Naval Communications.

7. The cognizance of this committee shall cover all phases of the interchange of information on crypto-equipment, crypto-developments and cryptoresearch between the Army and Navy. It will be concerned primarily, but not exclusively with information concerning mechanical, electromechanical, and electronic crypto devices and machines. It shall not have cognizance of any matters of cryptanalysis or communication intelligence except as information concerning such matters is essential to the performance of its duties.

8. Except as provided below there shall be within this committee and its sub-committees a completely open and free exchange of all information concerning research, development and procurement of both existing and newly developed and proposed crypto systems, devices and equipment.

9. The free exchange of information or equipment shall be contingent upon its use in accordance with mutually agreeable security regulations. Any special security measures prescribed by the service making the information or equipment available will be strictly observed by the service receiving such information or equipment.

10. Information concerning any system or device which either service desires to reserve for use by its own High Command (Item 7) shall not be disclosed or discussed within this committee. Such information shall be made known by (the senior AFSAC member of the reserving Service) only to (the senior AFSAC member of the other Service). Other members of the other Service shall not be acquainted with this reserved information without prior specific approval by the Chief of Naval Communications and the Chief of the Army Security Agency.

11. It shall be incumbent upon the service initially making a reservation to provide the other service with the system, device or equipment on a loan basis at such time as it is determined by the Joint Chiefs of Staff to be necessary and desirable for Joint High Command (class 7) use.

12. If and when any crypto system, device or equipment which has been reserved by either service is made available within that service to other than class 7 communications, the reservation formerly imposed on that system device or equipment shall be removed, and its complete details shall be made known to the other service in the manner provided in paragraph 8 herein.

7102054

ARMY SECURITY AGENCY

WASHINGTON, D. C.

SUMMARY ANNUAL REPORT OF THE ARMY SECURITY AGENCY FISCAL YEAR 1946 SUPPLEMENT

Prepared under the Direction of

CHIEF, ARMY SECURITY AGENCY

31 July 1947

WDGAS-13

FRONT SCANNED - COUNTED AS ONE PAGE - TOTAL - 59

TOP SECRET CREAM

HISTORICAL NOTE

When the Summary Annual Report of the Army Security Agency for the Fiscal Year 1946 was being prepared, some high-echelon material was brought to light which was of such a nature that its inclusion would have made it necessary to give a Top Secret Cream classification to the entire report. This was deemed undesirable, inasmuch as it would have restricted circulation of the Summary Report more than would otherwise have been necessary. The alternative was followed of bringing the Cream material together in this Supplement to the Summary Report.

Historian, AS-13
26 August 1947

TOP SECRET CREAM

TABLE OF CONTENTS

LIST OF EXHIBITS

SUMMARY ANNUAL REPORT OF THE

ARMY SECURITY AGENCY, FISCAL YEAR 1946

SUPPLEMENT

I. ACCOMPLISHMENTS OF CRYPTANALYSIS

A. The Chinese Problem

While Chinese diplomatic systems had been studied before[1] it was not until the post-War drop in Japanese traffic freed intercept facilities that a large volume of Chinese traffic was made available for study. A Chinese intercept mission, known as the "Yoke Mission," was assigned to MS-2, MS-9, MS-11, and ASA, Pacific; and some traffic was received from all, though MS-9 could intercept very little, and MS-11 was closed down in October 1945. As in the case of all other traffic, the volume of Chinese intercepts dropped sharply toward the end of the calendar year 1945, as demobilization crippled monitoring activities, and what traffic there was was derived largely from Navy, [redacted] (see Annual Report, FY 46, AS-93, p. 53).

EO 3.3(h)(2)
PL 86-36/50 USC 3605
EO 3.3b(6)

In November 1945, 29 Chinese systems were being studied. By June 1946 this had increased to 75, including both Diplomatic and Army. Chinese cryptography was characterized by use of a great number of plain and enciphered codes, and by numerous minor

---

1. There were 34 persons in the Chinese Section (B-III-d-2-a) in July 1945.

changes in encipherment. Approximately 600 discriminants were recorded between January and July 1946, each of which represented a sufficient variation to require separate solution. Under these conditions it was always a problem to accumulate sufficient traffic in one system, without variations, to make analysis possible.

Military Attache and Foreign Office traffic yielded much Intelligence of value to the Military Intelligence Service. Solution of the Attache system CNT[2] was completed and a beginning was made on CNT-1. Three encipherments (KKK,[3] PHOSE,[4] and CHD[5]) of known Foreign Office codes were solved.

Chinese military traffic, which was studied at the Army Security Agency for the first time, presented a picture similar to the Chinese Diplomatic traffic. There were many variations in encipherment, although it was determined that a smaller number of basic codes were in use than was at first believed. Code

[redacted]

---

2. During the Fiscal Year 1946 three-letter short titles were in use. For present-day equivalents, see Tab 1, Annual Report FY 46, AS-93. CNT and CNT-1 were transposed codes.

EO 3.3(h)(2)
PL 86-36/50 USC 3605

3. KKK was a series of monoalphabetic substitutions.

4. PHOSE, known as CNR-02 during research, was a polyalphabetic substitution using a Vigenere square.

[redacted]

B. The Chinese Communist Problem

An interesting offshoot of the Chinese Problem was the Chinese Communist Problem. To intercept traffic of the Chungking-Yenan circuit (later the Nanking-Yenan circuit) a special detachment under the control of ASA, Pacific was sent to Chungking. Intercept operations were carried on in Chungking from 17 February until 1 May 1946, when, following the transfer of the Chinese Government, the unit moved to Nanking. To augment the team, which had lost personnel, three additional men were assigned on 15 June 1946 to the Nanking operation.

Chinese Communist cryptography was technically sound, and it was believed that the highest echelon traffic made use of code enciphered by one-time additives. Some progress was made in reading a system known as CQA, which was identified as the Ming Code with additive encipherments. Several of these encipherments were solved.

Intelligence derived from Communist traffic was a priority objective. Colonel Hayes disclosed to the ASA Council on 23 April 1946 that General Marshall, then the President's representative in China, had written that this intelligence might shape American policy in China for years to come.

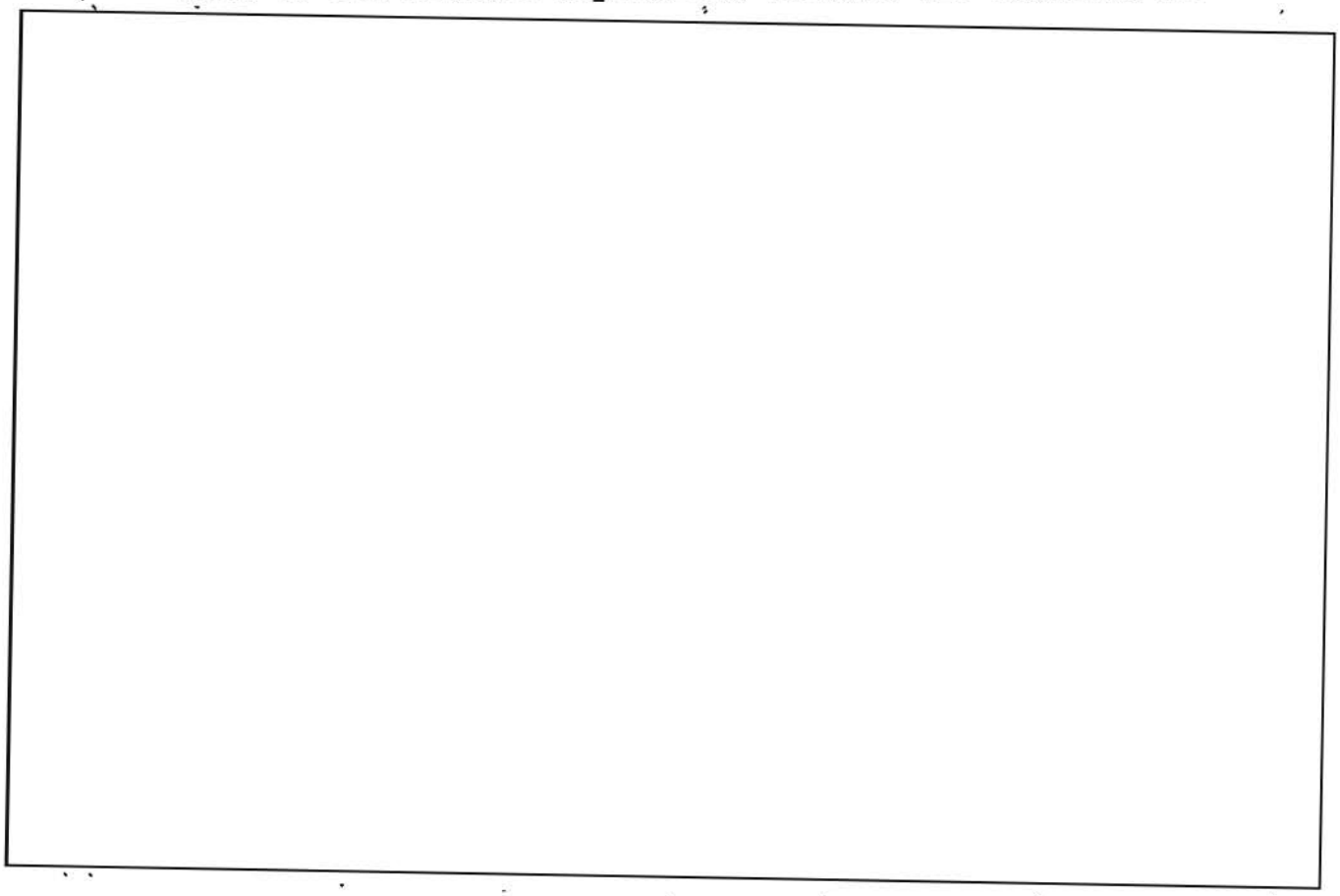
C. The Russian Problem

The growing division between the Soviet Union and the Western Allies following the defeat of Germany made information about Russian intent and capabilities a primary need. To meet this need, the Army Security Agency expanded its efforts on the

Russian Problem, under the cover names Taper and Bourbon. By 30 June 1946, AS-93-B, the section devoted to the Russian problem, was expanded to a strength of 283, more than triple its strength at the beginning of the fiscal year.

At one time during the year, more than 20,000 messages were intercepted in one month in military Morse traffic alone. To this figure must be added the non-Morse traffic, for which intercept facilities were being developed (see section on Intercept Mission). Non-Morse processing began in July 1945. A total of 81 systems of all kinds were identified in Russian traffic.

Half of all Russian diplomatic traffic was received in



[redacted] Additional work was done on Russian military and police systems, with varying degrees of success. Some systems, [redacted] were read almost in full, while others, [redacted] were more resistant to solution.

D. Miscellaneous Problems

Of the remaining national problems studied by the Army Security Agency, the most important was the French. Because of the penchant of the French for discussing their affairs, their communications contained considerable information of interest to the Military Intelligence Service. In January 1946, 48 per cent of all messages published in the Bulletin were of French origin. French cryptography made use of a great number of systems, many of them skillfully altered at frequent intervals. By the end of the year 106 French systems were in research or being exploited. Four codes had been reconstructed[8] and 20 encipherments had been solved [redacted]

[redacted]

While Russian, Chinese, and French problems were the greatest concern of the Agency after V-J Day, many other national systems were studied. Romance language systems of European and Latin-American origin were exploited, as were some of the systems of the nations of eastern and southern Europe. Some, like YOC, a Yugoslav system, proved resistant to analysis during this period, but work continued nevertheless. For a breakdown of messages decryptographed and translated, and for number of systems studied, see Tab 1.

II OPERATION SHAMROCK

The Cable Censorship officers had, during the War, furnished the Signal Security Agency and OP-20-G with copies of some foreign diplomatic traffic for study and exploitation. Cable censorship was lifted immediately after V-J day, and the Agency was faced by the problem of finding some other means of securing this traffic[9]. Secrecy

Arrangements were made with commercial communications companies for the Agency to have representatives at four large stations in the United States to photograph all foreign government traffic. Microfilm machines were set up, and ASA personnel examined all traffic and photographed whatever was of interest. The films were sent to the Agency by the fastest possible means

---

9. Minutes of ASA Council Meeting, 11 September 1945.

and were developed by the Laboratory Branch of the Operations Division. The traffic was then processed through normal channels. See Tab 2 for volume of traffic produced by Operation Shamrock.

III. HIGH-LEVEL LIAISON AND COORDINATION

The United States Communications Intelligence Board

The most important coordinating activity of the fiscal year in the field of signal intelligence was the establishment of close, official liaison with the Navy communications intelligence organization and the widening of this liaison to include the State Department, the Federal Bureau of Investigation, the Central Intelligence Group, and the London Signal Intelligence Centre.[10]

Throughout the War period, in fact before the outbreak of the war, there had been unofficial, informal contact between the Army and Navy signal intelligence organizations. Beginning on 18 April 1944, regular meetings were held by a liaison committee known as the Army-Navy Communications Intelligence Coordinating Committee (ANCICC)[11]. Meetings of ANCICC were held regularly throughout the Fiscal Year 1945, and working subcom-

---

10. 334 USCIB file. Minutes of USCIB and USCICC.

11. The first title of this body was Army-Navy Radio Intelligence Coordinating Committee. This was changed after the second meeting. See 334 Army-Navy Cryptanalytic Research Development Committee.

mittees were appointed for specific jobs, but the cooperation was on an Agency level rather than a departmental level.

On 10 March 1945 the Chief of Staff and the Chief of Naval Operations jointly issued a letter authorizing the setting up of a high-level board to coordinate signal intelligence activities of the two Services (Tab 3 Par.1). The Army-Navy Communications Intelligence Board (ANCIB) published its first organizational bulletin on 27 June 1945 (Tab 3). The Board consisted of four members: for the Army, the Assistant Chief of Staff G-2 and the Chief, Signal Security Agency; for the Navy, the Assistant Chief of Staff for Combat Intelligence, U. S. Fleet, and the Director of Naval Communications. The Board was outside the framework of the Joint Chiefs of Staff and reported directly to the Chief of Staff and the Chief of Naval Operations. Its function was to make major decisions on signal intelligence policy and coordinate signal intelligence with other intelligence needs and activities. Decisions were to be unanimous.

ANCICC was retained by ANCIB as its working organization, and membership in the Coordinating Committee was vested for the Army in the Deputy Chief, MIS and in the Chief, Signal Security Agency; for the Navy it was vested in the Assistant Director of Naval Communications, OP-20-G, in the Officer in Charge, Naval Supplementary Radio Activities, and in the Assistant Combat Intelligence Chief, U.S. Fleet. Working subcommittees were

provided for ANCICC[12], which were, in reality, continuations of previously existing subcommittees, but which now had a more formal status. Decisions of subcommittees, as well as those of ANICC, were to be unanimous.

The organization of ANCIB and ANCICC remained substantially unchanged until 5 April 1946 (Tab 4), when the position of Coordinator of Joint Operations was created, with the Chief, Army Security Agency as the first Coordinator. To assist the Coordinator, three groups were established under three Deputy Coordinators: (1) the Joint Processing Allocation Group, (2) the Joint Intercept Control Group, and (3) the Joint Liaison Group The primary function of the Coordinator was to assign problems to the operating agencies, subject to a basic agreement that purely military and purely naval traffic, including attache traffic, was to be handled by the Army and Navy respectively. The Coordinator was also given authority to conduct liaison with foreign services, which meant, in practice, with the British Commonwealth group.

Membership in the Board had previously been expanded to include the State Department. A memorandum, inviting State Department membership was sent on 11 December 1945 to Mr.

---

12. ANCICC subcommittees were as follows:
Collateral Information.
Communications Intelligence Communication.
Cryptanalytic Research and Development.
Intelligence and Security.
Intercept Coordination.
Intercept and D/F.
Traffic Analysis.

Alfred McCormack, Special Assistant to the Secretary of State for Research and Intelligence. The State Department on 20 December 1945 accepted membership and Mr. McCormack, to eliminate the need for indoctrinating State Department personnel, appointed himself as a member of ANCIB. A similar invitation was extended on 4 June 1946 to the Federal Bureau of Investigation, which maintained a small cryptanalytic section. This invitation was accepted on 11 June 1946. In recognition of its increased membership, the Board changed its title to United States Communications Intelligence Board (USCIB) and the Coordinating Committee's title was similarly changed to USCICC. The Central Intelligence Group was accepted for membership shortly after the close of the fiscal year.

The outstanding achievement of USCIB during the Fiscal Year 1946 was the negotiation of a signal intelligence agreement with the London Signal Intelligence Centre (LSIC). LSIC was the successor to the Government Code and Cypher School, and was responsible for coordinating the signal intelligence effort of the British Commonwealth. The first discussions were held in the United States on 15 October 1945, when a British group headed by Sir Edward Travis met with ANCIB and ANCICC in combined session. Drafts were prepared by both the British and American representatives, and an effort was made in later meetings to arrive at an agreement. Finally, another conference was held, this time in London in March 1946. The American representatives were: Lt. General Hoyt Vanderberg, then the

Assistant Chief of Staff G-2; General Corderman, Chief Army Security Agency; Colonel Frank Rowlett, Chief Operations Division; and Captain Philip J. Patton, Chief Intelligence Directives Section.

An agreement providing for a continuation of the close wartime liaison between the American and British signal intelligence services was reached and submitted to the President for approval. A copy of the British - U. S. agreement (BRUSA agreement) is on file with the USCIB Secretariat (AS-12). One of the immediate effects of this agreement was the establishment in London of a United States Combined Intelligence Liaison Center under a Senior Liaison Officer. This Center was to act as the representative of the United States in signal intelligence matters, and all liaison, reports, etc. were to be accomplished through its channels. Commander G. C. Manson, USN was the first Senior Liaison Officer.

5 March 1946 - UK-USA Agreement was signed.

APPENDICES

Production Totals
July 1945

Systems	Number Systems	Total Intercepts	Original Messages	Messages Decrypto-graphed	Messages Published
Diplomatic					
Exploited	184	50,659	23,343	21,920	10,776
In Research	55	8,779	4,380	184	
Not Worked On	46	28,332	26,259		
Total	285	87,770	53,982	22,104	10,776
Japanese Army					
Exploited	19	302,913	n.c.	106,694	18,254
Not Exploited	122	202,642	n.c.		
Total	141	505,555	a.	106,694	18,254
Plain Text		142,265	140,985		2,988
Grand Total	426	735,590	194,967a	128,798	32,018

Notes: a. (Incomplete; army traffic is approximately 50% duplicates).

August 1945

Systems	Number Systems	Total Intercepts	Original Messages	Messages Decrypto-graphed	Messages Published
Diplomatic					
Exploited	195	42,632	18757	16326	9,144
In Research	56	9,962	4508	79	
Not Worked On	53	16,613			
Total	304	69,207	39434	16405	9,144
Japanese Army					
Exploited	23	230,234	n.c.	69064	12,643
Not Exploited	137	184,047	n.c.		
Total	160	420,281	n.c.a	69064	12,643
Plain Text		125,764	124029	1737	796
Grand Total	464	615,252	163463a	87206	22,583

Notes: a. Not counted, therefore total incomplete (army traffic approximately 50% duplicates).

Production Totals
September 1945

Systems	Number Systems	Total Intercepts	Original Messages	Messages Decrypto-graphed	Messages Published
Diplomatic					
Exploited	186	33,712	15,713	14,180	7,530
In Research	46	8,147	4,164	30	
Not Worked On	89	4,934	5,512		
Total	321	46,793	25,372	14,210	7,530
Japanese Army					
Exploited	23	77,600	a.	19,185	3,428
Not Exploited	80	102,440	a.		
Total	103	180,040		19,136	3,428
Plain Text		112,454	940		4,877
Grand Total	424	339,287	26,312	33,345	15,835

Notes: a. Not counted separately from duplicates.

October 1945

Systems	Number Systems	Total Intercepts	Original Messages	Messages Decrypto-graphed	Messages Published
Diplomatic					
Exploitable	171	41,063	21,322	14,408	8,350
In Research	90	12,638	8,207	36	
Not Worked On	93	1,875	1,161		
Total	354	55,566	30,690	14,444	8,350
Japanese Army					
Exploited	21	23,693	n.c.	19,111	1,074
Not Exploited	84	14,957	n.c.		
Total	105	38,650		19,111	1,074
Plain Text		117,380	113,516		1,198
Grand Total	459	211,596	144,206	33,555	10,622

Production Totals
November 1945

Systems	Number Systems	Total Intercepts	Original Messages	Messages Decrypto-graphed	Messages Published
Diplomatic					
Exploited	177	35,004	20,566	12,907	7,077
In Research	104	11,079	7,044	2,304	
Not Worked On	51	1,101	712		
Total	332	47,184	28,322	15,211	7,077
Japanese Army					
Exploited	5	9,604	n.c.	9,310a	488
Not Exploited	6	7,981	n.c.		
Total	11	17,585			488
Plain Text		91,813	85,765		1,065
Grand Total	343	156,582	114,087	24,521	8,630

Notes: a. There was no report on Japanese army messages decrypto-graphed because the unit was in the process of reassignment during the month of November.

December 1945

Systems	Number Systems	Total Intercepts	Original Messages	Messages Decrypto-graphed	Messages Published
Diplomatic					
Exploited	173	29,377	18,101	10,365	5,668
In Research	102	10,840	6,597	277	
Not Worked On	72	3,807	22,810		
Total	347	43,824	27,508	10,642	5,668
Japanese Army					
Exploited	4	10,484	10,484	9,462	240
Not Exploited					
Total	4	10,484	10,484	9,462	240
Plain Text		184,766	183,186		970
Grand Total	351	239,074	221,178	20,104	6,879

Production Totals
January 1946

	Number Trigraphs	Total Intercepts	Original Messages	Messages Decrypto-graphed	Messages Published
Systems Exploitable	202	48,368	34,735	27,997a	7,772
In Research	106	10,316	6,424	154	
Not Worked On					
Total	374	63,580	44,570	28,151	7,772
Plain Text	61	101,042	97,196		1,498
Grand Total	435	164,622	141,766	28,151a	9,270b

Notes: a. Increase appeared chiefly in French military, Chinese, and Japanese military attache systems.
b. Increase in number published was due largely to translation of more JAS backlog, more plain-text messages.

February 1946

	Number Trigraphs	Total Intercepts	Original Messages	Messages Decrypto-graphed	Messages Published
Systems Exploitable	215	29,078	19,657	18,719	6,482
In Research	131	13,774	9,597	227	
Not Worked On	91	2,773	2,033		
Total	437	45,625	31,387	18,946	6,482
Plain Text	63	45,370	42,370		883
Grand Total	500b	91,243a	73,757	18,946c	7,365c.

Notes: a. Decrease from January in Chinese, Japanese, and French military and in commercial (QAZ) traffic.
b. Increase in number of systems was due to new short titles assigned to several sub-groups of FMG, CDA, and CNQ.
c. Decrease in number of messages decryptographed and published occurred in Japanese army, French diplomatic, Latin American, and German systems.

Production Totals
March 1946

	Number Trigraphs	Total Intercepts	Original Messages	Messages Decrypto-graphed	Messages Published
Systems					
Exploitable	239	28,476	19,112	18,309	6,095
In Research	106	14,109	10,480	109	
Not Worked On	106	3,142	1,921		
Total	451	45,727	31,513	18,418	6,095
Plain Text	62	64,782a	63,420		1,151
Grand Total	513	110,509	94,933	18,418	7,246

Notes: a. Increase in plain text messages received was in French military and Japanese commercial traffic.

April 1946

	Number Trigraphs	Total Intercepts	Original Messages	Messages Decrypto-graphed	Messages Published
Systems					
Exploitable	233	28,064	19,973	16,479	5,250
In Research	110	18,542	13,800a	32	
Not Worked On	113	1,422	1,009		
Total	456	48,028	34,782	16,511	5,250
Plain Text	61	64,437	63,045		1,220
Grand Total	521	112,465	97,827	16,511	6,470

Notes: a. The increase of originals in research was in French and Chinese traffic.

c ID: 6579558

TOP SECRET CREAM

Production Totals
May 1946

	Number Trigraphs	Total Intercepts	Original Messages	Messages Decrypto-graphed	Messages Published
Systems					
Exploitable	229	33,316	23,203	18,203	5,522
In Research	116	14,446	10,769	18	
Not Worked On	107	1,979	1,557		
Total	452	49,741	35,529	18,221	5,522
Plain Text	61	44,696	43,297		1,058
Grand Total	513	94,437	78,826	18,221	6,580

June 1946

	Number Trigraphs	Total Intercepts	Original Intercepts	Messages Decrypto-graphed	Messages Published
Systems					
Exploitable	201	28,904	21,255	13,784	4,600
In Research	118	16,319	12,033	19	
Not Worked On	127	1,950	1,447		
Total	446	47,173	34,735	13,803	4,600
Plain Text	55	66,518	65,171		929
Grand Total	501	113,691	99,906	13,803	5,529

TOP SECRET CREAM

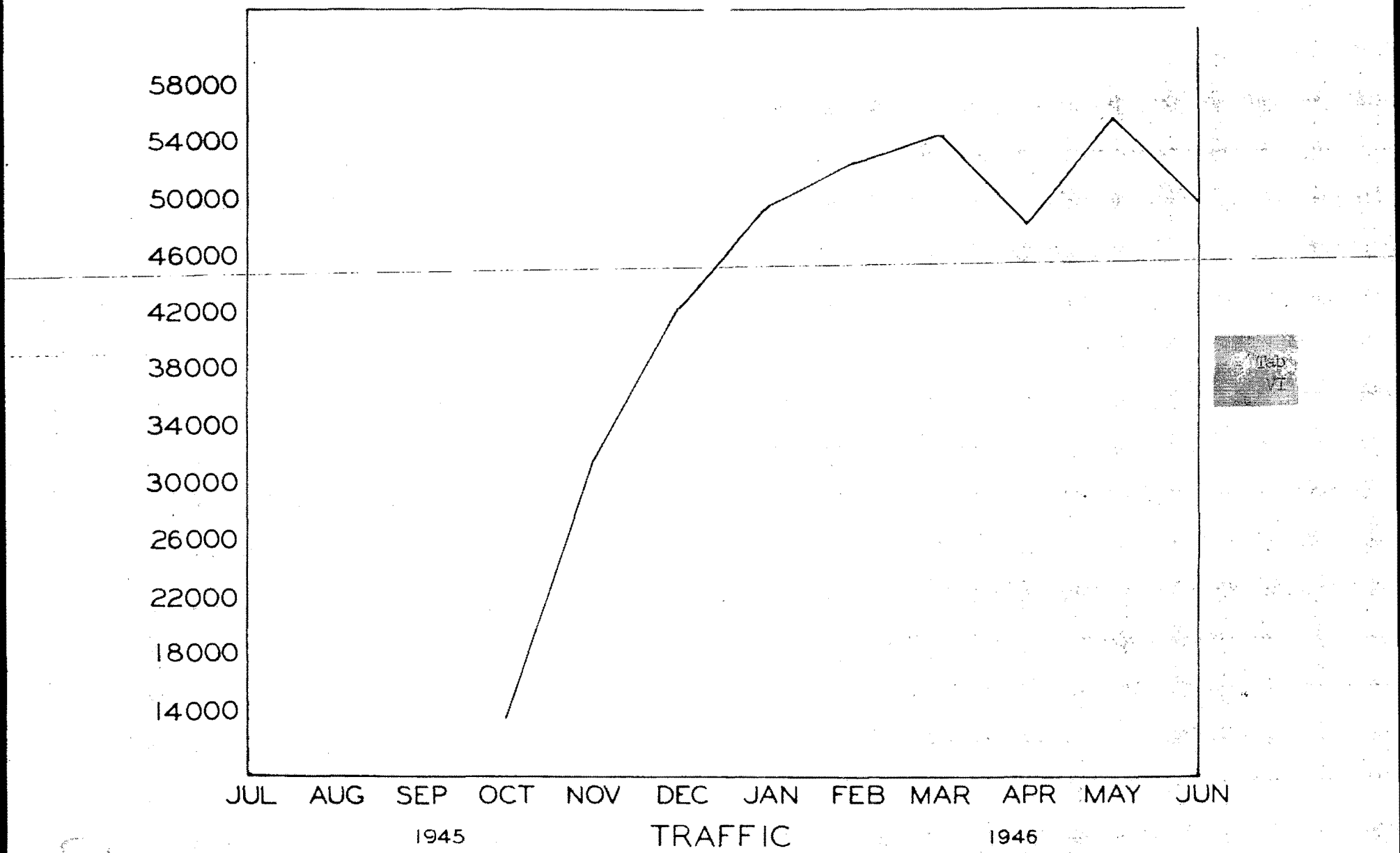
~~TOP SECRET~~ CREAM

STATISTICAL REPORT (1 July 1945 - 30 June 1946)

	July 1945	Aug.	Sep.	Oct.	Nov.	Dec.	Jan. 1946	Feb.	Mar.	Apr.	May	June	Totals
Parts													
Diplomatic Translations	8747	7462	6876	6433	4635	4300	5293	5931	6795	5521	4928	3735	70656
Japanese Military Translations	14066	12155	7015	1035	517	166	320	73	40	0	7	7	35401
Abstracts	5633	6793	2098										14524
French Military Translations					79	42	108	77	64	248	64	92	774
Chinese Military Translations								172	658	647	653	520	2650
Items													
Summaries of Diplomatic Translations	3553	2440	1979	3007	1417	1383	2559	1699	1501	1918	2049	1511	25016
Total	31999	28850	17968	10475	6648	5891	8280	7952	9058	8334	7701	5865	149021

~~TOP SECRET~~ CREAM

ID: 6579558


58000
54000
50000
46000
42000
38000
34000
30000
26000
22000
18000
14000
JUL
AUG
SEP
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
1945
TRAFFIC
1946

~~TOP SECRET~~

~~TOP SECRET~~

27 June 1945

ARMY-NAVY COMMUNICATION INTELLIGENCE BOARD

ORGANIZATIONAL BULLETIN NO. I

NOTE BY SECRETARIES

The Army-Navy Communication Intelligence Board has approved the transmission of the attached organizational bulletin to all members of the Army-Navy Communication Intelligence Board (ANCIB), its Coordinating Committee (ANCICC), and to senior Army and Navy members of ANCICC subcommittees.

OUTLINE

Lt. John V. Connorton
Capt. W. J. Fried
ANCIB-ANCICC Secretariat

c ID: 6579558

~~TOP SECRET~~

TABLE OF CONTENTS

~~TOP SECRET~~

~~TOP SECRET~~

TABLE OF CONTENTS (Cont.)

~~TOP SECRET~~

~~TOP SECRET~~

ARMY-NAVY COMMUNICATION INTELLIGENCE BOARD

I. ORGANIZATION AND FUNCTIONS OF THE BOARD (ANCIB)

General and Membership

1. The membership and responsibilities of the Army-Navy Communication Intelligence Board (ANCIB) are as prescribed in the following Joint Memorandum:

"JOINT MEMORANDUM FOR: Director of Naval Intelligence
Director of Naval Communications
Assistant Chief of Staff, G-2
Commanding Officer, Signal Security Agency

SUBJECT: Army-Navy Communication Intelligence Board - Establishment of

"1. The Army-Navy Communication Intelligence Board (ANCIB) is hereby established. It will consist of:

Navy Members	Army Members
Assistant Chief of Staff for Combat Intelligence, U. S. Fleet	Assistant Chief of Staff, G-2, WDGS
Director of Naval Communications	Commanding Officer, Signal Security Agency

"2. With respect to all matters pertaining to the collection, research, production, compilation, dissemination and security of communication intelligence, the Board will

a. Coordinate the plans and operations of the communication intelligence organizations of the Army and Navy.

b. Formulate joint agreements as to procedures pertinent thereto.

c. Negotiate and coordinate with other intelligence organizations.

"3. The Board will function outside the framework of the Joint Chiefs of Staff and report directly to the Chief of Staff, U. S. Army and the Commander in Chief, U. S. Fleet, and Chief of Naval Operations. The authority of the Board, outlined in paragraph 2, will be subject to the approval of the Chief of Staff, U. S. Army, and the Commander in Chief, U. S. Fleet, and Chief of Naval Operations.

"4. The Board will establish a working committee to be known as the Army-Navy Communication Intelligence Coordinating Committee (ANCICC), whose membership will consist of representatives of the authorities serving on the Board. The organization of ANCICC will be determined by the Board, and it will carry out such duties and operate under such regulations and procedures as the Board may prescribe.

(signed) G. C. MARSHALL
General of the Army,
Chief of Staff, U. S. Army

(signed) E. J. KING
Fleet Admiral, U. S. Navy
Commander in Chief, U. S. Fleet, and Chief of Naval Operations"

Establishment of Permanent Coordinating Committee

2. In conformity with the directive of the Chief of Staff, U. S. Army and the Commander in Chief, U. S. Fleet, and Chief of Naval Operations, ANCIB has established a permanent working committee to be known as the Army-Navy Communication Intelligence Coordinating Committee (ANCICC). The organization, functions and membership of ANCICC are set forth on pages 7-9 and may from time to time be altered by direction of ANCIB.

3. The work of ANCIB will be conducted by ANCICC and by standing subcommittees of ANCICC. ANCIB will meet only to decide questions of major policy and to consider matters upon which ANCICC cannot reach agreement. It will not, as a general rule, hold meetings independent of ANCICC meetings, but its members will, when necessary, hold joint meetings with ANCICC.

~~For State~~
~~TOP SECRET~~

Decisions of ANCIB

4. It may also make decisions informally and issue directives to ANCICC with respect thereto by written communications addressed to ANCICC or its Secretariat. Directives issued to ANCICC in the name of ANCIB need be signed only by the Senior Army or the Senior Navy member thereof, but shall require the concurrence of all members of ANCIB.

Reference to Higher Authority of Matters on Which No Agreement is Possible

5. ANCIB will act only by the unanimous vote of all of its members. When disagreement occurs between Army and Navy members of ANCIB, the Senior member from either Service may refer the matter to higher authority within his Service.

Dissemination of Minutes

6. Minutes of ANCIB, ANCICC or ANCIB-ANCICC meetings will be disseminated to all members of ANCIB and ANCICC, to persons designated by ANCIB or ANCICC as regular recipients of minutes, and to such others as may, from time to time, be specifically designated by ANCIB or ANCICC to receive minutes of particular meetings. Tentative minutes will be submitted for approval only to members actually present at meetings.

Duties of ANCIB Secretariat

7. The Secretariat will serve both ANCIB and ANCICC. Its detailed functions are set forth on pages 8-9.

ARMY-NAVY COMMUNICATION INTELLIGENCE BOARD

II. ORGANIZATION AND FUNCTIONS OF THE COORDINATING COMMITTEE (ANCICC)

General and Membership

8. The Army-Navy Communication Intelligence Coordinating Committee (ANCICC) constitutes the permanent working committee of ANCIB. Its present membership is as follows:

Deputy Chief, Military Intelligence Service, U.S. Army
Commanding Officer, Signal Security Agency
Assistant Director of Naval Communications, Op-20-G
Officer-in-Charge, U.S. Naval Supplementary Radio Activity, Washington, D.C.
Assistant, Combat Intelligence (COMINCH), U.S. Navy

Duty and Authority

9. ANCICC has the authority to make and implement decisions on all matters within the cognizance of ANCIB, except those involving major policy which should be referred to ANCIB. ANCICC will act only by the unanimous vote of all of its members. When disagreement occurs between Army and Navy members of ANCICC, the senior member from either Service may refer that matter to higher authority within his Service.

Monthly Meetings of ANCICC

10. Regularly scheduled meetings of ANCICC will be held on or about the second Wednesday of each month at each of the four agencies in rotation.

Agenda for ANCICC Meetings

11. The agenda for regular ANCICC meetings shall constitute a continuous inventory of all pending items. No item

appearing on the agenda is to be removed therefrom until it has been considered and acted upon. Items not originating within the ANCICC structure will be added to the agenda as soon as received.

Chairmen of ANCICC Meetings

12. The Chairman of each meeting of ANCICC will be the representative of the host station at which the meeting is held. Responsibility of the chairman for the activities of the meeting of ANCICC begins with the regular monthly meeting over which he presides and does not end until the next regular monthly meeting which is held under the auspices of another member of ANCICC.

Absences from Committee Meetings

13. Any committee member, if unable to attend an announced meeting, may authorize a representative of his service to act on his behalf.

14. Failing such action, any committee member (or alternate) who is absent from an announced meeting is considered to have agreed with any decision taken upon the announced agenda except when an emergency prevents his attendance. In the event of such an emergency, a request for further consideration must be given to the Secretariat at the earliest opportunity.

Duties of the Secretariat

15. ANCICC is assisted by standing subcommittees. (See pages 16-17 for list of subcommittees and their responsibilities). The Secretariat, consisting of a representative from the Navy and a representative from the Army will, as directed by ANCICC:

a. Assign specific tasks to particular subcommittees.

b. Render reports directly to ANCICC when subcommittee action appears unnecessary.

c. Ensure that matters pertaining to more than one subcommittee shall be considered by all subcommittees concerned, in parallel or joint session rather than in succession.

d. Whenever practicable, set due dates for completion of subcommittee reports and arrange interim meetings of subcommittees when urgent or emergency action is necessary.

e. Prepare the agenda and keep the minutes of the meetings of ANCIB and ANCICC, maintain adequate records concerning the activities of ANCIB, ANCICC and the subcommittees, and coordinate the exchange of correspondence between ANCICC and the various subcommittees.

ARMY-NAVY COMMUNICATION INTELLIGENCE BOARD

III. ORGANIZATION AND FUNCTIONS OF STANDING SUBCOMMITTEES OF ANCICC

Duties and Authority of Standing Subcommittees

16. ANCICC is assisted by subcommittees composed of members from the Army and Navy. A subcommittee will act only by the unanimous vote of all of its members. When disagreement occurs between Army and Navy members of a subcommittee, the senior member from either Service may refer the matter to higher authority within his Service.

17. The duties of a subcommittee of ANCICC, with respect to matters within its cognizance (see pages 16-17), are to:

a. Establish its own methods of procedure in carrying out its duties.

b. Make and implement decisions on specific matters insofar as the members of the subcommittee have authority to make and implement decisions on such matters for their respective services.

c. Discuss informally, and when directed by ANCICC or properly authorized by higher authorities in each Service, make recommendations to ANCICC concerning matters not within (b) above.

18. Subcommittees are expected to initiate studies and projects for the improvement of coordination. Each subcommittee of ANCICC may request other subcommittees for such information and assistance as may be required in connection with its duties.

Subcommittees and Their Composition

19. Each subcommittee is organized to study and report on problems arising in a designated sector of the communication intelligence field. Except as specifically authorized by ANCICC the membership of subcommittees is limited to two representatives of the U. S. Navy and two representatives of the U. S. Army.

20. Members of the subcommittees of JNCICC have been chosen to represent the interest of their organizations and to contribute expert knowledge and experience to the solution of mutual problems. Members are appointed by the respective branches of the service to which they belong and nominations do not require formal approval of JNCICC. The Secretariat shall be notified of all changes in subcommittee membership.

Meetings of Subcommittees

21. Regularly scheduled meetings will be held on or about the third Wednesday of each month, but if the urgency of subcommittee work requires, additional meetings should be held as often as necessary to enable the subcommittees to complete their work expeditiously.

Subcommittee Chairmen

22. Subcommittees of JNCICC will meet alternately under Army and Navy auspices. The chairman of each meeting of JNCICC subcommittees will be the senior officer present of the host station at which the meeting is held.

Duties of Subcommittee Chairmen

23. The responsibility for expeditious action on matters referred to a subcommittee, as well as the responsibility for the form, completeness and accuracy of its reports, rests upon the chairman of the subcommittee. It is his duty to secure a unanimous agreed decision if possible. If no such decision can be reached (a) the senior member of either Service may refer the matter to higher authority within his Service and (b) in matters referred by JNCICC to the subcommittee, JNCICC shall be informed that the subcommittee was unable to reach a decision.

24. The responsibility of a chairman for the activities of his subcommittee begins with the monthly meeting over which he presides and does not end until the next meeting which is held under the auspices of the senior member of the other service.

~~TOP SECRET~~

~~TOP SECRET~~

Monthly Reports of Subcommittees

25. The monthly report of each subcommittee will include (a) the agenda for the meeting; (b) minutes of the meeting; and (c) a brief resume of not more than two pages, double spaced, with each item listed separately under three headings:

(1) Important items discussed at the meeting
(2) Important items to be discussed at the next meeting
(3) Questions to be referred to ANCICC

26. For convenience in filing and uniformity in presentation, it is requested that the resume of the monthly meeting be placed on top of the minutes, with the agenda beneath the minutes, when submitting the subcommittee report to the Secretariat.

27. Two copies of the monthly report of each subcommittee will be sent to the Secretariat, one directly to the Army representative and the other directly to the Navy representative. Other copies will be furnished by the secretary of the subcommittee to the members of the subcommittee concerned, and to their respective commanding officers as directed.

Completion Dates

28. ANCICC has authorized its Secretariat to fix dates for the completion of reports and other matters referred by ANCICC to subcommittees.

Absences From Subcommittee Meetings

29. Any subcommittee member, if unable to attend an announced meeting, may authorize a representative of his service to act on his behalf.

30. Failing such action, any subcommittee member (or alternate) who is absent from an announced meeting is considered to have agreed with any decision taken upon the announced agenda except when an emergency prevents his attendance. In the event of such an emergency, a request for further consideration must be given to the Secretariat at the earliest opportunity.

Committee of Primary Interest

31. When a task has been assigned a subcommittee, the subcommittee will be presumed to have primary interest in the task and will take all necessary steps to accomplish it, including special meetings and coordination with other appropriate subcommittees by joint meetings or otherwise to the end that the report on the task may be presented to the Secretariat of ANCICC with the least practicable delay. If due dates cannot be met, report of reason for the delay should be submitted to the Secretariat as soon as known, but, at the latest, in time to be presented to ANCICC at its regular meeting. The report should contain a recommendation for a new due date.

Working Committees

32. Subcommittees may designate working committees to aid them in completing specific tasks. A working committee need not be composed solely of members of the subcommittee concerned. The chairman of the working committee will select the time and place of its meetings and will notify the members thereof.

Expert Assistants

33. Subcommittees may request the presence of specially qualified persons, military or civilian, to aid them in effectively accomplishing their work. Such persons may also serve on working committees.

Coordination

34. Complete coordination of all matters not involving policy must be effected at subcommittee level, and is the responsibility of the subcommittee chairmen. Complete coordination requires:

(a) Consultation of all members within the subcommittee. Secretaries of subcommittees will be responsible for circulating all reports, minutes of meetings, documents, etc. for the approval of the members of the subcommittee before submitting them to ANCICC.

(b) Consultation by members of the subcommittee assigned primary interest with other subcommittees having an overlapping interest.

(c) Consultation by members of the subcommittee assigned primary interest with their respective services for advice. However, subcommittees are required to achieve solutions of the problems presented after full consideration of all pertinent factors.

Expediting of Business

35. Prompt completion of assigned tasks is essential to the effectiveness of ANCICC. Subcommittee members are to give prompt attention to work assigned to them. Whenever practicable, chairmen should appoint working committees to undertake solution of specific problems in advance of formal consideration in subcommittee meetings.

Special Recommendations - Completed Staff Work

36. Where a matter considered by a subcommittee is the subject of a recommendation to be forwarded for consideration by ANCICC, a report shall be prepared by the originating subcommittee and seven copies of it sent to the Secretariat. The paragraphs of each report should be numbered consecutively with Arabic numerals. The report should be as brief as the nature of the case permits and should be limited to two pages, double spaced, with additional material attached as appendices, annexes, and tabs as may be necessary. The special report containing a specific recommendation should contain:

(a) Name of the subcommittee.
(b) Date of report.
(c) Statement of the subject matter of the case or nature of the problem presented.
(d) Statement of facts bearing on the case.
(e) Statement of the conclusions of the subcommittee.
(f) Recommendations of the subcommittee drafted in such manner that they include a directive, letter, or language suitable for promulgation by ANCICC. It must contain completed staff work.

(g) Affirmative statement that the matter has been

coordinated with other subcommittees (names) and the result of such coordination. If no problem of coordination is involved, an affirmative statement that no coordination was deemed necessary shall be made.

(h) Signature of the Chairman of the subcommittee.

37. "Completed Staff Work" is the presentation by a staff officer or group of completed action, leaving nothing to be done by his chief but to approve or disapprove it. Writing a memorandum to his chief does not constitute "Completed Staff Work," but writing a memorandum for the chief to send to someone else does. The writer's views should be in final form so the chief can make them his own simply by signing.

Effective Dates

38. In preparing their recommendations, subcommittees should give consideration to the establishment of dates when their recommendations should become effective, if adopted by ANCICC, and should include recommended effective dates in their reports. Recommendations as to effective dates should not be permitted to delay the submission of agreed recommendations, either by reason of disagreement as to the effective date or because of the additional time required for full coordination with other subcommittees or authorities outside ANCICC.

Receipts for ANCICC Documents

39. The Secretariat and the secretaries of the various subcommittees enclose receipts with all documents forwarded to members. It is requested that these be returned as promptly as possible.

40. All documents relating to ANCICC activities should be classified as Top Secret or Secret. Though no receipts requiring classification should be issued, addressees are responsible for checking all receipts before returning them to the Secretariat or the secretaries of the various subcommittees to ensure that the receipt has been properly classified.

ARMY-NAVY COMMUNICATION INTELLIGENCE BOARD

IV. LIST OF ANCICC SUBCOMMITTEES AND THEIR RESPONSIBILITIES

41. Collateral Information

Responsible for coordinating the acquisition, compilation, and exchange of all background material other than communication intelligence, which may be of value to the analysis, translation, or production of communication intelligence.

42. C. I. Communications

Responsible for coordinating the operation of the communications systems of the communication intelligence organizations.

43. Cryptanalytic Research and Development

Responsible for coordinating the following functions:

a. Information as to techniques of cryptanalysis.
b. Research and development of cryptanalytic machinery.
c. Development and procurement of non-mechanical aids to cryptanalysis.
d. Crib exploitation.
e. Information concerning current or potential cryptanalytic tasks.

44. Intelligence and Security

Responsible for coordinating the compilation and dissemination of communication intelligence and for establishing security measures essential to its protection.

45. Intercept Coordination

Responsible for exchanging all information regarding enemy, neutral, and clandestine frequencies, and for coordinating

the intercept assignments to obtain optimum coverage of productive frequencies.

46. Intercept and D/F Operation

Responsible for coordinating the planning, establishment, operation, maintenance, methods, and equipment of the intercept, D/F, and emission identification activities.

47. Traffic Analysis

Responsible for coordinating traffic analysis methods, procedures, and results.

~~TOP SECRET~~

~~TOP SECRET~~

ARMY-NAVY COMMUNICATION INTELLIGENCE BOARD (1)

Schedule of Meetings

1945-46

ANCICC

	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE
Date of Meeting	11	8	12	10	14	12	9	13	13	10	8	12
Place of Meeting	F-20	MIS	SSA	NCA	F-20	MIS	SSA	NCA	F-20	MIS	SSA	NCA

ANCICC Subcommittees (2)

	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE
Date of Meeting	18	15	19	17	21	19	16	20	20	17	15	19
Place of Meeting of:												
1. Collateral Information	NCA	SSA	NCA	SSA	NCA	SSA	NCA	SSA	NCA	SSA	NCA	SSA
2. C. I. Communications	NCA	SSA	NCA	SSA	NCA	SSA	NCA	SSA	NCA	SSA	NCA	SSA
3. Cryptanalytic Research & Development	SSA	NCA	SSA	NCA	SSA	NCA	SSA	NCA	SSA	NCA	SSA	NCA
4. Intelligence & Security	MIS	NCA	MIS	NCA	MIS	NCA	MIS	NCA	MIS	NCA	MIS	NCA
5. Intercept Coordination	SSA	NCA	SSA	NCA	SSA	NCA	SSA	NCA	SSA	NCA	SSA	NCA
6. Intercept & D/F Operations	NCA	SSA	NCA	SSA	NCA	SSA	NCA	SSA	NCA	SSA	NCA	SSA
7. Traffic Analysis	NCA	SSA	NCA	SSA	NCA	SSA	NCA	SSA	NCA	SSA	NCA	SSA

(1) Date of meeting may be changed to suit the convenience of the members. Special meetings may be called at any time by the Senior Member of ANCIB or by Chairmen of ANCICC and subcommittees.

(2) Subcommittee meetings will be held under auspices of Army and Navy alternately; senior officer of host station will be chairman. Subcommittee reports are due on the fourth Wednesday of each month, one week after the dates scheduled above.

~~TOP SECRET~~

~~TOP SECRET~~

ARMY-NAVY COMMUNICATION INTELLIGENCE BOARD

BOARD ROSTER

Army:

Major General Clayton Bissell

Colonel W. Preston Corderman

Captain Walter J. Fried, Secretariat

Navy:

Rear Admiral Hewlett Thebaud

Rear Admiral Joseph R. Redman

Lieutenant John V. Connorton, Secretariat

~~TOP SECRET~~

TOP SECRET

ARMY-NAVY COMMUNICATION INTELLIGENCE BOARD

ANCICC ROSTER

Army:

Brig. General Carter W. Clarke

Colonel W. Preston Corderman

Captain Walter J. Fried, Secretariat

Navy:

Captain J. N. Wenger

Captain Philip R. Kinney

Captain W. R. Smedberg, III

Lieutenant John V. Connorton, Secretariat

~~TOP SECRET~~

~~TOP SECRET~~

ARMY-NAVY COMMUNICATION INTELLIGENCE BOARD

ANCICC SUBCOMMITTEE ROSTER

COLLATERAL INFORMATION

Army:	Navy:
Major John H. Connor	Lt. Comdr. Gilbert E. Boone
Mr. Henry W. Rigby	Lt. Comdr. L. R. Wilson
Lt. William E. Titus	

C. I. COMMUNICATIONS

Army:	Navy:
Mr. Robert M. Morris	Captain L. H. Frost
Captain Carl J. Knorr	Lt. Comdr. H. A. Penhollow

CRYPTANALYTIC RESEARCH AND DEVELOPMENT

Army:	Navy:
Col. Harold G. Hayes	Captain H. T. Engstrom
Mr. W. F. Friedman	Comdr. Charles A. Ford
Col. Solomon Kullback	Comdr. Robert J. Ely, III
Lt. Col. Leo Rosen	Lt. Comdr. Edward W. Knepper
Lt. Col. Frank B. Rowlett	Lt. W. R. Deffert
Captain Walter J. Fried	Lt. Arthur Anderson

INTELLIGENCE AND SECURITY

Army:	Navy:
Col. Alfred McCormack	Captain J. J. Rochefort
Col. Samuel McKee, Jr.	Comdr. Gordon W. Daisley
Major W. B. Snow, Jr.	Comdr. R. J. Fabian
Major John H. Connor	Comdr. W. J. Sebald
	Lt. (jg) Elaine Adams

INTERCEPT COORDINATION

Army:	Navy:
Major James C. Taylor	Comdr. Ralph S. Hayes
Captain David H. Mendelsohn	Lt. Comdr. William T. Bandy
Captain Robert M. Diggs	CRE Norman V. Lewis

~~TOP SECRET~~

~~TOP SECRET~~

INTERCEPT AND D/F OPERATIONS

Army:
Mr. Robert M. Morris
Major Everett N. Sieder
Captain C. R. Deeter

Navy:
Comdr. John S. Cross
Lt. Comdr. William C. Norris
Lt. Charles E. Daniels

TRAFFIC ANALYSIS

Army:
Major James C. Taylor
Captain Walter T. Powers
Captain Robert M. Diggs
Lt. Clarence C. Baresch

Navy:
Captain John A. Williams
Lt. (jg) D. L. Whitlock

~~TOP SECRET~~

~~TOP SECRET~~

ARMY-NAVY COMMUNICATION INTELLIGENCE BOARD

ALPHABETICAL LIST OF BOARD, COMMITTEES AND SUBCOMMITTEE MEMBERS

Name	Org.	Date-Rank	Room No.	Phone No.	Committee or Sub-committee
ADAMS, Lt. (jg) Elaine	NCA	1 Feb. 45	1106, NCA	Ext. 2561	Intelligence & Security
ANDERSON, Lt. Arthur	NCA	14 Jul. 43	1121, NCA	Ext. 501	Cryptanalytic Research & Deve.
BANDY, Lt. Cdr. William T.	NCA	17 Oct. 44	1139, NCA	Ext. 2501	Intercept Coordination
BARASCH, Lt. Clarence	SSA	29 Apr. 44	2203B, AHS	Ext. 323	Traffic Analysis
BISSELL, Maj. Gen. Clayton	MIS	13 Mar. 43	2E800, Pentagon	Ext. 73577	ANCIB
BOONE, Lt. Cdr. Gilbert E.	NCA	15 June 42	3310, NCA	Ext. 751	Collateral Information
CLARKE, Brig. Gen. Carter W.	MIS	10 Nov. 44	2E780 Pentagon	Ext. 74195	ANCICC
CONNOR, Maj. John F.	SSA	28 Aug. 44	1052 B, AHS	Ext. 391	Intel. & Security Collateral Info.
CONNORTON, Lt. John V.	NCA	1 July, 44	17-309, NCA	Ext. 1871	Secretariat
CORDERMAN, Col. W. Preston	SSA	1 Feb. 42	111, AHS	Ext. 211	ANCIB, ANCICC
CROSS, Comdr. John S.	NCA	15 Oct. 42	1118, NCA	Ext. 3651	Intercept & D/F Operations
DAISLEY, Comdr. Gordon W.	NCA	15 Oct. 42	17-109, NCA	Ext. 1671	Intelligence & Security
DANIELS, Lt. Charles E.	NCA	1 July 44	1118, NCA	Ext. 3661	Intercept & D/F Operations

~~TOP SECR~~

~~TOP SECRET~~

Name	Org.	Date-Rank	Room No.	Phone No.	Committee or Subcommittee
DEETER, Capt. C. R.	SSA	8 June 1944	1100B, AHS	Ext. 436	Intercept & D/F Operations
DEFFERT, Lt. W. R.	NCA	1 Feb. 45	3008, NCA	Ext. 3602	Cryptanalytic Research & Dev.
DIGGS, Capt. Robert M.	MIS	5 Jan. 45	2D-742 Pentagon	Ext. 5945	Traffic Analysis Intercept Coord.
ELY, Comdr. Robert J. III	NCA	15 Mar. 44	2102, NCA	Ext. 1551	Cryptanalytic Research & Dev.
ENGSTROM, Capt. F. T.	NCA	15 May 45	1103, NCA	Ext. 3731	Cryptanalyt Research & Dev.
FABIAN, Comdr. R. J.	NCA	1 Nov. 42	1106, NCA	Ext. 2561	Intelligence & Security
FORD, Comdr. Charles A.	NCA	20 Aug. 42	1215, NCA	Ext. 1471	Cryptanalytic Research & Dev.
FRIED, Capt. Walter J.	SSA	1 Jan. 44	1022-B, AHS	Ext. 315	Cryptanalytic Research & Dev. Secretariat
FRIEDMAN, Mr. W. F.	SSA	--------	116, AHS	Ext. 215	Cryptanalytic Research & Dev.
FROST, Capt. L. B.	NCA	15 Jul. 44	3109 NCA	Ext. 821	C. I. Communications
HAYES, Col. Harold G.	SSA	30 Jan. 43	1032 AHS	Ext. 311	Cryptanalytic Research & Dev.
HAYES, Comdr. Ralph S.	NCA	15 Aug. 42	1139, NCA	Ext. 2401	Intercept Coordinator
KINNEY, Capt. Philip R.	NCA	21 June 42	1107-9, NCA	Ext. 3451	ANCICC
KNEPPER, Lt. Cdr. Edward W.	NCA	1 July 43	1331, NCA	Ext. 712	Cryptanalytic Research & Dev.
KNORR, Capt. Carl J.	SSA	29 Feb. 44	1401-A, AHS	265	C. I. Communications
KULLBACK, Col. Solomon	SSA	27 Apr. 45	B-2040, AHS	Ext. 321	Cryptanalytic Research & Dev.
LEWIS, Norman V.	NCA		17-137, NCA	Ext. 642	Intercept Coordination

~~TOP SECRET~~

~~TOP SECRET~~

Name	Org.	Date-Rank	Room No.	Phone No.	Committee or Subcommittee
McCORMACK, Col. Alfred, GSC	MIS	24 June 42	2E768 Pentagon	Ext. 5509	Intelligence & Security
McKEE, Col. Samuel Jr., GSC	MIS	11 May 45	2D653 Pentagon	Ext. 72591	Intelligence & Security
MENDELSOHN, Capt. David H.	SSA	17 Feb. 45	2026-B, AHS	Ext. 380	Intercept Coordination
MORRIS, Mr. Robert M.	SSA	---------	1056-A, AHS	Ext. 332	C. I. Communications Intercept & D/F Operations
NORRIS, Lt. Cdr. William C.	NCA	1 Oct. 44	1122-C, NCA	Ext. 2821	Intercept & D/F Operations
PENHOLLOW, Lt. Cdr. H.A.	NCA	1 July 43	3107, NCA	Ext. 3502	C. I. Communications
POWERS, Capt. Walter T	SSA	19 Oct. 44	2200B, AHS	Ext. 323	Traffic Analysis
REDMAN, Rear Adm. Joseph R.	DNC	1 July 42	2524, Navy	Ext. 3313	ANCIB
RIGBY, Mr. Henry W.	MIS	---------	2C686, Pentagon	Ext. 6506	Collateral Information
ROCHEFORT, Capt. Joseph J.	NCA	10 June 43	17-203, NCA	Ext. 1821	Intelligence & Security
ROSEN, Lt. Col. Leo	SSA	27 Oct. 44	1100, AHS	Ext. 284	Cryptanalytic Research & D
ROWLETT, Lt. Col. Frank B.	SSA	8 May 44	1020-B, AHS	Ext. 315	Cryptanalytic Research & Dev
SEBALD, Comdr. W. J.	COMINCH	15 Oct. 42	3402-A, Navy	Ext. 3459	Intelligence & Security
SIEDER, Maj. Everett N.	SSA	4 Feb. 44	2044-B, AHS	Ext. 335	Intercept & D/F Operations
SMEDBERG, Capt. Wm. H. III	COMINCH	1 Aug. 43	3509, Navy	Ext. 63319 or 63825	ANCICC
SNOW, Maj. W. B., Jr.	MIS	24 Feb. 44	2A680 Pentagon	Ext. 6967	Intelligence & Security

~~TOP SEC. I~~

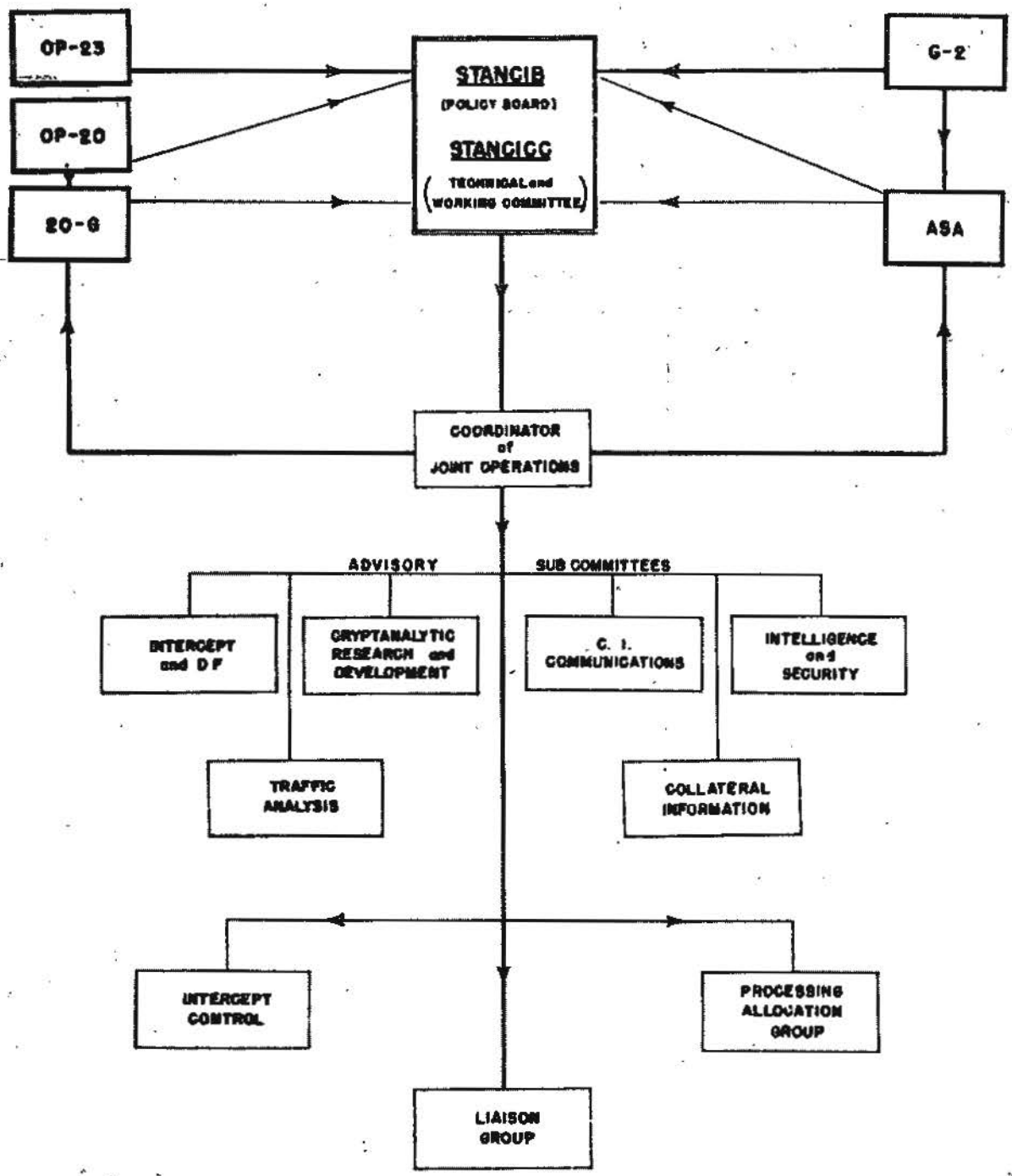
~~TOP SECRET~~

Name	Org.	Date-Rank	Room No.	Phone No.	Committee or Subcommittee
TAYLOR, Maj. James C.	SSA	28 Apr. 45	200-B, AHS	Ext. 323	Traffic Analysis
THEBAUD, Rear Adm. Hewlett	COMINCH	21 June 42	3076, Navy	Ext. 3925	ANCIB
TITUS, 1st Lt. William E.	SSA	6 Oct. 44	2A680	Ext. 73910	Collateral Information
WENGER, Capt. Joseph N.	NCA	1 May 43	17-105, NCA	Ext. 2551	ANCICC
WHITLOCK, Lt. (jg) D. L.	NCA	1 Dec. 44	17-127, NCA	Ext. 1641	Traffic Analysis
WILLIAMS, Capt. John A.	NCA	26 Mar. 45	17-137, NCA	Ext. 641	Traffic Analysis
WILSON, Lt. Cdr. L. R.	NCA	1 May 43	17-B 32, NCA	Ext. 751	Collateral Information

Doc ID: 6579558

SECRET

ARMY – NAVY
C. I. COORDINATION PLAN



SECRET

15 MARCH 1940

5 April 1946

DUTIES AND RESPONSIBILITIES

OF THE

COORDINATOR OF JOINT OPERATIONS

Reference: (a) Memorandum, Subject "Coordination of Army and Navy Communication Intelligence Activities," dated 15 February 1946.

Incl: (A) Chart of "Army-Navy C.I. Coordination Plan," dated 12 March 1946.

1. The Coordinator of Joint Operations shall function, as shown in Inclosure (A), under the control of STANCIB-STANCICC as executor of policies and directives formulated by STANCIB-STANCICC for the allocation of tasks for such intercept and processing capacities as may be made available for joint use by ASA and OP-20-G, and for coordination of all joint projects with other U. S. and foreign intelligence agencies. The operating heads of ASA and OP-20-G will be responsible to the Coordinator for accomplishment of the tasks allocated by him.

2. The Army will continue to be responsible for work on military and military attache systems and the Navy for work on naval and naval attache systems. Work on other systems will be a joint responsibility and shared accordingly. It is expected that a certain percentage of the intercept and processing capacities will be reserved and controlled entirely by ASA and OP-20-G

respectively for the performance of the strictly military or naval tasks. The remaining capacities will be placed at the disposal of the Coordinator for accomplishing the other tasks as he may direct. In the utilization of the joint capacities thus made available to him to accomplish joint tasks directed by STANCIB-STANCICC, he shall be guided by the principle of (1) obtaining the maximum of intelligence in the minimum of time, (2) maintaining technical continuity, and (3) providing continued training of the personnel of both communication intelligence organizations on all types of communication intelligence problems. It is not required that all capacities allocated to the Coordinator necessarily be used on problems of joint interest. For example, it may become desirable for naval supplementary radio stations to intercept traffic of a purely military nature in which the Navy would have no interest other than furnishing assistance.

3. To assist him in carrying out his duties, there will be a Joint Intercept Control Group, a Joint Processing Allocation Group, and a Joint Liaison Group. In addition, he shall have assigned to him the necessary clerical, administrative, and technical assistants and facilities from each service, but in the interest of minimizing his requirements in these respects he will use the established facilities of the two agencies wherever practicable.

4. In controlling intercept coverage, he will assign coverage in a manner calculated to obtain optimum results from circuits

of maximum value. He will be supplied by each agency with all available information regarding frequencies in use and will maintain the master record of such data. He will obtain and publish to each service ionospheric data as required.

5. He will be responsible for keeping necessary records regarding the availability, location, capabilities, assignments, and production of all receiving positions of both agencies. He shall disseminate this information to both agencies.

6. In carrying out his duties of allocating processing tasks to each service, he shall be guided by the following principles:

a. The Army will be responsible for all military, including military attache, systems and the Navy for all naval, including naval attache, systems. If an Air Arm of a target country is an integral part of that country's Army or Navy, traffic of that Air Arm will be regarded as strictly military or strictly naval as the case may be and the processing allocated accordingly. If, on the other hand, there is an independent Air Arm its processing will be allocated to the Army or Navy in accordance with the principles set forth in this document and with due consideration to the potential operational threat which that Air Arm represents to each service. Whenever the interests of one agency require participation in air work carried on by the other agency personnel of the former may be assigned to the latter for such purpose.

b. For all systems other than strictly military or strictly naval, allocation shall be made in accordance with the following principles progressively considered.

(1) In the case of primary targets (critical countries or areas as defined by STANCIB), available capacity in terms of facilities and qualified personnel for handling the task shall govern. As far as possible, each processing center will be given tasks in sufficient volume to utilize completely its full potentialities. Subject to the foregoing the various cryptographic systems shall be allocated and apportioned to the Army and to the Navy in such a manner that both services will (a) have appropriate processing responsibilities for each primary target, (b) acquire experience, information and skill in each field, (c) develop methods for dealing with the cryptographic and language problems involved.

(2) In the case of ancillary targets, so far as facilities permit systems will be allocated primarily on the basis of nationality, and secondarily on the basis of the possibilities for cross-working. [(For example, all Portuguese diplomatic systems would be allocated to one unit; systems which find their most useful cross-cribs in systems previously allocated to the Army would also be assigned to the Army.)

(3) Assuming that consideration of available personnel, facilities and nationality does not decide allocation, then the relationships of the textual content to (a) primary interest

and (b) existing allocations will determine the allocation. (For example, lacking any other basis for allocations, systems concerning marine shipping and ship building would go to Navy by virtue of primary interest.)

c. Prior to allocation of unsolved or unallocated systems for processing, the Coordinator may request either or both agencies to work simultaneously on the same system for purposes of research and initial solution.

d. Allocation of a task carries with it the responsibility for control and direction of the work, but does not preclude the responsible service from accepting or requesting assistance from the other when desirable. For most effective communication intelligence operations allocations should be fairly static to permit personnel to become thoroughly acquainted with the problems and techniques on which they are specializing. However, responsibility for any system may be transferred from one service to the other as necessary to readjust the workload of the processing centers and to carry out the basic principles governing allocations.

7. a. The allocation of tasks on the principles set forth in paragraph 6 will require that the Joint Processing Allocation Group maintain detailed records of the following:

(1) Status of all systems, joint-task and otherwise, including those which are being satisfactorily processed as well as those on which no satisfactory progress has been made.

(2) Current information from all processing centers concerning availability and use of (a) personnel, space, mechanical

facilities and special talents; (b) training needs; (c) crypto-intelligence; (d) identification data; (e) agreements; and (f) policy. The information contemplated in this subparagraph covers all phases of the work at both agencies.

b. It is inherent in this plan that the Joint Processing Allocation Group shall expect each service to furnish all essential information promptly, completely, regularly, and in a form prescribed.

c. The following general principles shall govern the forwarding and accumulation of raw traffic:

(1) All traffic in allocated systems will be sent by the service obtaining the traffic directly and promptly to the unit responsible for its processing.

(2) All unallocated or unidentified traffic will be received, accumulated, studied and appropriately filed by the units having been assigned responsibility for traffic of that type or nationality.

(3) If and when systems are removed from allocation for lack of usefulness or other reason, all raw traffic and pertinent technical information will be held by the unit in possession of the material until and unless other arrangements are made by the Joint Allocation Control.

(4) When an allocation or reallocation occurs, all accumulated raw traffic and technical data will be turned over to the unit receiving the allocation.

(5) If traffic cannot be identified as to type or nationality it will be forwarded to the Processing Allocation Group which will be responsible for its identification and allocation accordingly.

8. To assist in providing for diversity of training, there will be a mutual and liberal exchange of technical working personnel of all categories between the two services. The initiative for the assignment of such personnel will rest with the respective services. However, the Coordinator will review all requests for assignment of such personnel and will be responsible for insuring the adequacy of the technical training of the personnel of both services. Such assignments will not involve the administrative transfer of personnel from one service to the other.

9. The Coordinator will maintain a liaison group which will be charged with the control of all liaison with other U.S. and foreign intelligence agencies on matters under the cognizance of the Coordinator. This includes supervision of liaison personnel on duty in foreign centers. In carrying out this responsibility it is expected that after liaison on a subject is established the Joint Liaison Group will merely exercise general supervision and will permit direct liaison between working groups concerned.

10. The Coordinator will establish and maintain a system for the nomenclature of circuits and cryptographic systems and subsystems which shall be used by cooperating units in official communications concerning such systems.