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DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT CHIEF OF STAFF, G-2, INTELLIGENCE
WASHINGTON 25, D. C.

26 May 1954

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MEMORANDUM FOR: EXECUTIVE SECRETARY, USCIB

SUBJECT: Security Classification of "The Signal Corps: The Emergency."
Reference: USCIB 13.5/51

1. The Army has drafted for publication a history of the Signal Corps entitled "The Signal Corps: The Emergency". A review of the history revealed that it contains information which is essentially the same as that contained in "The Final Secrets of Pearl Harbor" and other articles made available to the public in unclassified form as referred to in the reference.

2. Pages 205-214 and 769-798 of the Signal Corps history have been extracted and are inclosed herewith. In view of the information contained in USCIB 13.5/51, it is requested that the inclosure be placed before USCIBSECCOM for consideration.

FOR THE ASSISTANT CHIEF OF STAFF, G-2:

(signed)
THOMAS M. LARNER
Colonel, GS
Chief, Plans and
Policy Office

1 Incl
pp. 205-214 SigC Hist
pp. 769-798 Sig C Hist
(10 copies)

Enclosure with SECCOM 13.8/6

Declassified and approved for release by NSA on 04-08-2014 pursuant to E.O. 13526

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29 June 1954

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~~SECRET - U.S. EYES ONLY~~MEMORANDUM FOR THE MEMBERS OF USCIBSECCOM

Subject: Security Classification of "The Signal Corps:
The Emergency"

References: (a) ✓ Enclosure 2 with USCIB 13.5/69 dated 25 May 1954
(b) USCIB 13.5/51 dated 7 April 1954

1. Attached herewith is a memorandum from the Assistant Chief of Staff, G-2, Department of the Army, enclosing certain extracts (containing COMINT information) from a draft Department of the Army publication "The Signal Corps: The Emergency".

2. As requested by the Army, and in line with USCIB policy as stated in paragraph 5, reference (a), this document has been referred to the Security Committee by the Executive Secretary, USCIB, for study and recommendation in regard to its classification and handling.

3. In comparing "The Signal Corps: The Emergency" with Rear Admiral Theobald's book "The Final Secrets of Pearl Harbor", (see reference (b)), consideration should be given to the fact that the former document is an official publication while the latter is not. It is the opinion of the Chairman that a history of U.S. COMINT operations, bearing official sanction, would be far more likely to find its way to foreign COMINT or COMSEC authorities than would an unofficial publication regarding Pearl Harbor, even though the latter might contain similar information. Once in the hands of foreign COMINT authorities, the information contained in the Department of the Army document would certainly be considered more reliable than that contained in Admiral Theobald's book.

4. The Chairman believes that any history of COMINT operations should remain in COMINT channels. Even though all portions of the document in question may have appeared separately in the public press, the aggregate contains information, the unauthorized disclosure of which would endanger the effectiveness of a program of vital importance to the national defense. The document should therefore be classified "SECRET".

5. It is planned to place this item on the agenda for the July meeting of the Security Committee.

William R. Culmer
WILLIAM R. CULMER
Major, Arty., USA
Chairman, SECCOM

Enclosure -
a/s

SECCOM: 13.8/6

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EXTRACTS FROM PUBLICATION
"THE SIGNAL CORPS: THE EMERGENCY"

3. Communications Obscurity

Cryptic communication had as few. The whole range of signal intelligence included monitoring, goniometric location, and procedural security and extended to almost any aspect of tactical operations. But the cryptographic-cryptanalytic ³⁷ portion of

37 For the sake of convenience, this book uses the word cryptography to indicate the process in general of putting messages into secret forms or symbols for the sake of security. At a routine level, this is the work of code clerks in message centers. At the opposite extreme, where it means the actual building of cryptographic systems, it is the creative task of experts. Cryptoanalysis indicates the reverse process of bringing secret matter into the clear. Accomplishing this result with a key provided is the work, again, of message center clerks, and whether they decode or decipher or decrypt such messages this book refers to their task under the general term cryptanalysis. The same word is also applied to the work of the professional cryptanalysts who endeavor to break down secret systems whose key is unknown.

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signal intelligence was as small a duty as motion-picture photography was, and infinitely more esoteric. It was such secret work that whoever entered it was automatically a man apart. It was an in-again-out-again, seen-unseen, now here-now there function, so highly specialized that its product was manufactured almost exclusively for the General Staff's Military Intelligence Division. Indeed, the work had been conducted in MID until the principle of separation of powers which ~~Secret Staff~~ and command distinct removed it

and lodged it with the Chief Signal Officer, an operating activity with an operating agency. Within his sphere, however, it had a place separate from his other responsibilities, walled off from them by the sensitive Staff purpose it served.

Basic cryptography had been a part of the Chief Signal Officer's mission since the Corps had been assigned the duty of preparing the War Department telegraph code. ³⁸ Field Codes,

³⁸ Regulations for the Army of the United States, 1913, Art. LXXVII. Signal Corps, para. 1556. The code was almost immediately compromised after the nation went to war. Capt Garland C. Black, "The G-2 Signals Team," Signal Corps Bulletin No. 90 (May-Jun 36), 24-42.

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staff codes, Military Intelligence Division codes and others were also compiled, this being the sort of work for which the Signal Corps made its original contract, in 1921, with W. F. Friedman, the man who became a prime mover in it. Some of the work was not for military use at all. Among the outside duties for which the subsequent Signal Intelligence Section was sought was the devising of a cryptographic system for the Crop Reporting Board of the Department of Agriculture, because gambling in crop futures made it vital for the Government to keep the statistics inviolate until they could be given a general and simultaneous release. Occasional service to business houses, at the request of the Department of Commerce, and to the Coast Guard, made other tangents to the main circle of interest. ³⁹

³⁹ CSigO Annual Rpt, FY 32, suppl.

In distinction from cryptography, cryptanalysis made a gradual

appearance. Before the First World War, code and cipher solution had been "almost entirely unknown to the War Department or to the Government of the United States as a whole."⁴⁰ Under

⁴⁰ WD Annual Rpts, 1919, Rpt of CofS, Vol. I, Pt. 1, p. 329.

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the pressure of war, the task of solving codes had been charged to MI-8, a newly-created section of the Military Intelligence Division which had brought together a company of university scholars typified by the Chaucer authority, John Matthews Manly. After the treaty of peace had dispersed this section, a distillation of it had moved quietly to New York City, there to continue the wartime work in peacetime. A former State Department cler, Herbert O. Yardley, had made himself expert in cryptanalysis, and accordingly became head of the supersecret activity. State and War maintained the work jointly, but when President Hoover and Secretary Stimson, coming into office in 1929, determined to withdraw the Department of State funds from it, and the War Department preferred to carry it on entirely within its own administration, the New York "Black Chamber"⁴¹

⁴¹ The sensational nickname given to it by analogy from the similar French organization. Herbert O. Yardley, The American Black Chamber (Indianapolis, 1931).

closed and Mr. Yardley was left to assume that code-breaking had been discontinued altogether.

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It had not been. Bereft of State Department co-sponsorship for the secret New York activity, the War Department could have continued it, but did not, partly because there would have been a necessity for making up two-thirds of the expense which State had borne, and partly because

neither the officer-in-charge nor the civilian-in-charge of the Signal Corps work cared to intercede or to recommend. The former, Major Owen S. Albright, had made a tour of inspection earlier in 1929 which had not impressed him favorably. ⁴² The latter was Friedman,

⁴². Interview sources (not cited).

whose name had already become closely related to Signal Corps code work and was to become inseparable from it. Because of these two reasons, therefore, the Military Intelligence Division, which had subcontracted its cryptanalytic work to Yardley, now transferred it to the Office of the Chief Signal Officer, and transferred the responsibility, too. It jointed the cryptographic work which had been formalized there, in the Personnel or Research Divisions, since 1922. The assignment gave authority for solution of enemy messages in time of war only. ⁴³

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⁴³ (1) OCSigO Office Memo No. 54, 30 Sep 22. (2) OCSigO Office Memos Nos. 132 and 140, 26 Nov and 26 Dec 29.

(3) AR 105-5, Chg. 1, 10 May 29. (4) CSigO Annual Rpt, FY 30, 10 Oct 30, pp. 13-14.

However, it became apparent that an army could not begin reading the enemy's codes on the day a war began. One must learn before that, even though doing so meant violating the privacy of powers still officially friendly. This was the inescapable result of the general use of codes by nations, part of a universal trespass recognized quite apart from conventional standards of international morality.

At first, the new duty meant very little. For some years the Signal Corps had encouraged interest in code-solving of an elementary sort:

sample problems appeared in the Bulletin, including a message found in the yard of an eastern penitentiary, which junior members of the Code and Cipher Section solved in 50 minutes; an Army extension course in cryptography was offered; and Mr. Friedman went to Monmouth from time to time to give a course of lectures⁴⁴; but these were all necessarily inconclusive.

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⁴⁴ (1) Signal Corps Bulletin No. 56 (Sep-Oct 1930), p. 55. (2)
CSigO Annual Rpt, FY 30, pp. 13-14.

Friedman did find it possible to hire five associates. Their peculiar talents for mathematics, oriental and classical languages, statistics, mechanics or philology laid the basis for the exact and arcane training they entered upon and ultimately built up a group skilled enough to break cardinal Japanese codes before the Second World War broke upon the United States.⁴⁵

⁴⁵ Pearl Harbor Attack: Hearings before the Joint Committee on the Investigation of the Pearl Harbor Attack, 79th Cong., 1st Sess., Pt. 34, Proc. of Clarke Investigation, pp. 84-85, and Pt. 36, Proc. of Hewitt Inquiry, pp. 311-312, Washington, D.C., 1946.

At the outset of their work, however, they were new men exploring a new field. During some of that period Colonel Mauborgne was stationed as signal officer at the Presidio of San Francisco, and, because his enthusiasm let him to keep a "ham" intercept station going in his office during hours off duty, was able to supply the cryptanalysts with a problem or two. But such intercepts were wholly insufficient to provide real practice.⁴⁶

Cryptanalysis was not really born

46 Interview sources (not cited).

in the Signal Intelligence Section until events two years after its transfer there. In the first place, the heaviest happening of 1931, and a major historical climax between wars, was the successful Japanese invasion of Manchuria. This overturn of the order of things made it important to the foreign and military policy of the United States to put a security check on the Pacific while British experts kept track of the other side of the world. A much less significant but much more immediate cause of the transformation of the Signal Intelligence Section was the circumstance that Yardley, having fully determined for himself that the Government had done with code-breaking and would not reinstate it, decided that he could tell about it. The book which resulted, The American Black Chamber, was such a monumental indiscretion that diplomatic and military security staggered.⁴⁷ The Japanese Empire learned for the first time

⁴⁷ AG file 388.3 (8-26-31), passim.

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that all of its messages had been understood at the time of the great Disarmament Conference of 1921, publicly protested, and secretly launched a program to change all of its security forms and devices. Friedman now found himself starting over again, with a task a hundred times more difficult.

He had with him Messrs. Clark, Hurt, Kullback, Rowlett and Sinkov, the five who had entered upon the work in 1930; and the Signal Intelligence Section had been given permission to train officers as well in its techniques. Lieutenant Mark Rhoads became the first student in 1931 and Lieutenant W. Preston Corderman the second in 1932. The original plan had been to

tutor one officer a year, as was done in photography, procurement and other fields; but the work proved to be far more difficult and exacting than a single year could profitably contribute to; and in any case, the training made a team of two necessary. ⁴⁸ Rhoads was continued when Corderman came in, and

⁴⁸ Memo ACofS G-1 for CofS, 2 Oct 35, no sub. AG 319.12 (8-27-35).

Corderman in turn, with his successors, had a similar two-year span of training. A related project to give preliminary training

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in the Reserve Officers Training Corps came to nothing because cryptanalysis starts at a fairly high level, comparable to that of a bachelor's degree, and continues in a climate which is basically scholarly. It is not suited to the capsule quality of R.O.T.C. training, with one subject swallowed every Friday.

There was a gradual addition of staff in the Signal Intelligence Section. By 1936, there were 14, and the Section had an allowance of 176 for an emergency. 176 persons would not be found for the work in a hurry, let alone be made expert overnight, but the authorization was bolstering. Another source for cryptanalytic work was an officer assigned after an extended tour of duty in Tokyo; and an arrangement with the Federal Bureau of Investigation increased the facilities for instruction. ⁴⁹

⁴⁹ CSigO Annual Rpt, FY 33, Suppl., p. 23.

Captain Rhoads became ill in 1935 and retired, but after a long recuperation returned as a civilian when it grew apparent that the war required him. Corderman followed the military progression and ultimately became the commanding general of the wartime security agency. With this group of

civilians and young officers the secret, exasperating, lonely work went on. Expertness increased,

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CHAPTER XII

PEARL HARBOR

1. Tension

Most of all, those who waited in the cryptanalytic chambers of the high Washington headquarters waited tensely, for they held a great secret. Since early 1939, the Signal Corps' cryptanalysts had been directing their best efforts toward solving the Japanese ultra-secret diplomatic code, which was known as the purple system. Never before had they been confronted with such a difficult problem, and at first their progress was slow. So baffling did the purple system seem to be that Mauborgne asked Friedman, the chief cryptanalyst, to put aside the administrative duties in which he was then primarily engaged.¹ Twenty months of tedious, dreary work

1 Jt. Committee, 79th Cong., 1st Sess., Hearings before the Joint Committee on the Investigation of the Pearl Harbor Attack, (Wash., D.C., 1946), Exhibit No. 147, Pt. 34, Clarke Investigation, pp. 84-85, and Exhibit No. 149, Pt. 36, Hewitt Inquiry, pp. 311-312. Hereafter, referred to as JCC Hearings with part and pages cited.

Friedman suffered a nervous collapse and was ill nearly five months; he returned to the Signal Intelligence Service in April, 1941.

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pinned down the secret which had eluded both British and German cryptanalysts. In August, 1940, the first complete translation was handed in, and the United States government thereby gained an incalculable advantage. The

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confidential and explosive information which was being exchanged by the Japanese envoys in Washington and Tokyo became a matter of record in the United States. So large a gift did the American leaders consider the breaking of the Japanese code that they referred to it as "Magic."²

2 (1) Ibid. (2) George Morgenstern, Pearl Harbor: The Story of the Secret War (New York, 1947), p. 168.

In the possession of "Magic," the United States held a priceless weapon. But like many secret weapons, it caused its possessors innumerable headaches over the question of how best to use it. Which was to be paramount: guarding the secrecy of "magic," or using it to gain a military advantage? What was important enough to jeopardize its security? The Army policy was clear and well-defined; it limited the number of people who knew the secret, and it did not send information based on intercepted messages to field commanders. There was always the possibility that the Japanese would intercept our own messages, or that from the very nature of the action we took they would be able to deduce that we must have broken their codes. The Navy, which had been furnished full information as soon as Signal Intelligence Service had broken the purple code, on the other hand did send some paraphrased information based on intercepts to their theater commanders, at least until the middle of July, 1941. For the whole of the war, the question would have to be considered and reconsidered each time that the military leaders made a decisive move. It was a grave responsibility.³

3 JCC Hearings, pt. 4, Testimony of Rear Admiral T. S. Wilkinson, pp. 1736-1737.

The Signal Intelligence Service in late 1941 reflected the augmentation in personnel, space, and facilities which had been granted to it

ahead of almost all other War Department agencies.

From a handful of men it had grown to a strength of 181 officers, enlisted men, and civilians in Washington, and 150 officers and enlisted men in the field. Operationally, the Signal Intelligence Service was a division of the Operations Branch of the Office of the Chief Signal Officer, with headquarters in the Munitions Building. It consisted of the Signal Intelligence School, the 2nd Signal Service Company, and four operating sections: administrative; cryptanalytic, which studied various kinds of traffic; cryptographic, which was responsible for all Army cryptographic systems, for security studies, and for monitoring traffic for violations of communications security; and laboratory, a section which prepared secret inks, tested suspected documents, and performed photographic services.

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Colonel Otis K. Sadtler was chief of the Operations Branch within the Office of the Chief Signal Officer, and Lieutenant Colonel Rex W. Winckler was officer in charge of the Signal Intelligence Service, with Major Harold G. Hayes as his executive officer, and William F. Friedman as his civilian assistant. The 2nd Signal Service Company furnished military personnel for a varied assortment of duties, manned the intercept stations, and served as a convenient military unit to which signal intelligence personnel could be assigned. ⁴

⁴ Army Security Agency, "A Lecture on the Origin and Development of the Army Security Agency, 1917-1947," Mar 48. SigC Hist Sect file.

During 1941, by agreement between the two services, the Army and Navy worked together intercepting, decoding, and translating Japanese diplomatic and consular dispatches, to even the work load and share the credit. The division of labor was arranged simply: messages originating on even dates

were decrypted and translated by the Army; those with odd dates the Navy processed. In the opinion of the Army's chief cryptanalyst, this arrangement was more satisfactory from an administrative than from a cryptoanalytic standpoint.⁵

⁵ JCC Hearings, Exhibit No. 147, Pt. 34, Clarke Investigation, Testimony of William F. Friedman, pp. 34-36, 83-84. (2) Ibid., Exhibit No. 149, Pt. 36, Hewitt Inquiry, Testimony of Captain L. F. Safford, USN, p. 146. (3) Ibid., Pt. 10, Testimony of Admiral Noyes, p. 4751.

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Not all messages sent by Japan, intercepted by monitoring stations, and forwarded to Signal Intelligence Service were handled with equal promptness. The high military officials understood the reasons; as the chief of military intelligence said: "I felt sure those devoted men who spent so much time on it were doing everything they possibly could do.... The astonishing thing... was not that these messages were delayed in the process of translation from Japanese to English, but that we were able to do it at all. It was a marvelous piece of work on the part of the highly technical men who handled that extraordinary job of breaking codes and ciphers." ⁶ Most of the "magic" messages were

⁶ Ibid., Pt. 2, Testimony of General Sherman Miles, p. 865.

in the hands of high intelligence officers within an hour or two from their time of origin. Others might not be deciphered and translated for a day, or a week, or even a month. There was first of all a scarcity of qualified cryptanalysts and translators. Secondly, the messages had to be picked out of the air by intercepting stations located at widely separated points. No one station could pick up all of them; there had to be stations

at many points in order to intercept any appreciable amount of traffic. Not all stations had equal facilities for forwarding the intercepts to Washington. Some had teletype machines, and could forward messages promptly; some sent them on by radio; some used air mail. Such was the case with the Army's station in Hawaii,

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which sent an accumulated packet of intercepts to Washington once each week by commercial air Clipper, or by ship in case bad weather delayed the Clipper's departure. The only messages Hawaii transmitted to Washington by radio were those especially selected according to instructions from the Office of the Chief Signal Officer. When messages were received, they were sorted into categories of priority set up by agreement between the Chief Signal Officer and the Director of Naval Communications. Ordinarily, two things determined the order in which messages were handled: first, the precedence of the dispatch, that is, the urgency with which it was sent; and second, the particular code used. As a rule, messages in the purple system got first priority because it carried the most important traffic and because solving it involved complicated electrical machine analysis, while several other Japanese codes comprised essentially manual cryptographic analysis. From time to time a message of considerable importance would come through in a "low" or "medium" grade code, usually because the place of origin did not have the higher level codes, or because a code machine or transmitting station had broken down. After the messages were sorted into priority groups, the Signal Intelligence Service men first of all had to get a "key" to the message in order to decipher it. That could take anywhere from 15 minutes to a week or a month. In some cases, it might never be solved. Once the message ~~was decrypted~~, or sufficiently decrypted to indicate some importance, it went to the translators. They scanned the

message for information, and those that seemed most important they translated first. There was no way of knowing what was in a message, or even what it was about until it could be deciphered and scanned by a translator. Externally the messages showed nothing, except for the priority and the type of code used. After being decrypted and translated, one copy of each message was retained by the Signal Intelligence Service, and additional copies went to G-2 and the Office of Naval Intelligence for distribution. ⁷

7 (1) JCS Hearings, Pt. 2 (Miles), p. 799. (2) Ibid., Pt. 10, (Maj. Robert Shukraft), p. 4019. (3) Ibid., Exhibit No. 148, Clausen Investigation, pt. 35 (Col C. A. Powell), p. 82 and (Col Rex Minckler), pp. 103-104. (4) Ibid., Exhibit No. 149, Hewitt Inquiry, Pt. 36, (Powell), p. 227.

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2. The Magic Messages

In Japan, the Konoze cabinet had fallen, to be replaced by a tough minded government eager to take advantage of the opportunity to seize a rich empire in the Far East. In Washington, a series of diplomatic talks had begun between Secretary of State Cordell Hull and Japan's ambassador, Admiral Kichisaburo Nomura, assisted by a special diplomatic envoy, Saburo Kurusu. Meanwhile, through "magic," the American government was able to read most of what the Japanese were saying among themselves, stripped of diplomatic niceties. Within the War Department, the intercepted Japanese diplomatic messages were distributed to Secretary of War Stimson; Chief of Staff General George C. Marshall; Chief of the War Plans Division, G-3, Major General Leonard T. Gerow; Chief of the Military Intelligence Division, G-2, Brigadier General Sherman Miles; and Chief of the Far Eastern Division

of G-2, Colonel Rufus S. Bratton. On alternate months they were sent to President Roosevelt or occasionally to his military aide, General Watson; in the months when the Navy made the White House distribution, the War Department distributed the messages to a select group of State Department officials. When intercepted messages came in, trusted couriers carried them in locked pouches to the recipients, who read the messages, and returned them to the courier, who thereafter burned all copies except the single original for file.

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In addition to the officers on the regular distribution list, who were classified as "ultra," there were others who were concerned in one degree or another with "magic." General Miles had Colonel Moses W. Pettigrew as his executive officer, and Colonel Bratton's Assistant was Colonel Clyde Dusenbury. Colonel Walter B. Smith was secretary to the General Staff. The Navy group included Admiral Leigh Noyes, Director of Naval Communications, his assistant, Captain J. E. Redman; Captain L. F. Safford, Chief of Communications, Security Division; Captain A. D. Kramer, who was responsible for distribution of "magic" messages within the Navy; and Admiral Richard K. Turner, Chief of War Plans Division. Within the Signal Corps were Colonel O. T. Sautler, Chief of the Operations Branch, Lieutenant Colonel Rex W. Winkler, Chief of Signal Intelligence Service; Major Robert E. Shukraft, Winkler's assistant in charge of radio intercepts; Captain Harold Doud, chief of the code and cipher section; and William F. Friedman, principal cryptanalyst, with whom the whole thing had begun. These men of necessity knew something, but not everything, about "magic," and fitted into the intelligence network in important, but lesser roles. 14

In November, definitely ominous notes were introduced into the Japanese diplomatic messages. On 22 November, Tokyo sent a significant dispatch to Nomura and Kurusu, stressing that they were working against

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a deadline which had been set for November 25 and later changed to November 29: " . . . This time we mean . . . that the deadline absolutely cannot be changed. After that, things are automatically going to happen." 15 The War Department sent out identical warning messages to all commands

15 JCC Hearings, Pt. 12, Exhibits, Record of Intercepts, p. 165.

to report measures taken. On November 19, Japan sent two messages which implied that a complete breakdown in relations was impending. These messages, which were translated and in the hands of American authorities on November 28, set up a code by which Japanese diplomatic officials all over the world could be warned of a break in diplomatic relations. They came to be known as the "winds" messages, as follows:

In case of emergency (danger of cutting off our diplomatic relations), and the cutting off of international communications, the following warning will be added in the middle of the daily Japanese language short wave news broadcast.

- (1) In case Japan-U.S. relations are in danger: HIGASHI NO KAZE ABE (East wind rain).
- (2) Japan - U.S.S.R. relations: KITA NO KAZE KIMORI (North Wind cloudy).
- (3) Japan-Brirish relations: NISHI NO KAZE HARE (West wind clear).

this signal will be given in the middle and at the end of a weather forecast and each sentence will be repeated twice. When this is heard please destroy all code papers, etc. This is as yet to be a completely secret arrangement.

Forward as urgent intelligence.

* * * * *

When our diplomatic relations are becoming dangerous, we will add the following at the beginning and end of our general intelligence broadcasts:

- (1) If it is Japan-US relations, "HIGASHI."

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- (2) Japan-Russia relations, "KITA."
- (3) Japan-British relations, (including Thai, Malaya, N.E. I.), "NISHI."

The above will be repeated five times and included at beginning and end.

Relay to Rio de Janeiro, Buenos Aires, Mexico City, San Francisco.¹⁶

16 Ibid., pp. 154-155.

When the "winds" code messages came in, the interest of Army and Navy intelligence officers focused on their meaning, and the importance of intercepting their follow-up message, the so-called "winds" execute message, which would put Japanese war plans into execution. Interest heightened when the "winds" messages were followed by one which contained instructions to the Japanese diplomatic corps throughout the world to begin destroying their codes and code machines.¹⁷ Intelligence

17 Ibid. Pt. 12, pp. 208-210, 215-216.

officers disagreed on just which was the most significant intercept, but all agreed that the cumulative effect pointed to war. At the time, everyone thought that when an implementing message came through, it would be the signal for which they were waiting.

Colonel Sadtler directed that every Signal Corps facility strain to intercept the "winds" execute message. He coordinated efforts with the Navy. Major Shukraft alerted the monitor stations. Sadtler, Minckler and Shukraft decided that Monitor Station No. 2 in San Francisco would have

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the best chance of getting the message. In a teletype conference with that station, Shukraft directed that all Japanese intelligence broadcast be monitored and forwarded intact to Washington. He went to Fort Hunt, Virginia, just down the Potomac, where Monitor Station No. 7 was located, and alerted

the officer in charge there to watch for a repetition of words, which would appear unmistakably in the Japanese message that Washington wanted. The specific Japanese code words were not given to either monitoring station. Because the Signal Corps monitor stations had no Japanese linguists, Lieutenant Colonel Wesley T. Guest, chief of the Communications Liaison Division in the Office of the Chief Signal Officer, made arrangements with the Federal Communications Commission to be particularly watchful of all voice broadcasts from Japan, and gave the commission the English translations of the code words. ¹⁸ Intelligence officers agreed that an

¹⁸ (1) JCC Hearings, Pt. 10, Testimony of Major Robert Skaukraft, pp. 4914-4919 and Testimony of Colonel Otis K. Sadtler, pp. 4628-4659. (2) Ibid., Pt. 29, Exhibit 145, AFHB Proceedings, Testimony of Colonel Otis K. Sadtler, pp. 2427-2433.

authentic implementing "winds" message when it came would have to conform in all respects to the conditions outlined by the two intercepted messages; it would not be enough if only part of the conditions were met. The Japanese were meticulous; it would be out of character for them to

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deviate in any detail from their pre-arranged code. In addition, there was the fact that they had set up the code for use in case the ordinary means of communication were cut off. The embassies they would be attempting to reach in such a case would be listening at the time and under the exact conditions specified. In the next few days, several messages were intercepted which bore some resemblance to the expected "winds" code message, but none of them fitted the whole pattern.

Meanwhile, the new Chief Signal Officer, General Olmstead, was too deeply engrossed in matters of supply and organization to pay much attention

to the Signal Corps' intelligence functions. He was less interested in cryptographic activities and the "magic" intercepts than his predecessor, General Mauborgne, who had had cryptographic training at Fort Leavenworth in the 1900's. ¹⁹ Olmstead may have seen an

¹⁹ Ibid., Exhibit 147, Pt. 34, Clarke Investigation (Friedman), p. 83. The chief of Army military intelligence, General Sherman Miles said "general Mauborgne was principally responsible for that magnificent work of breaking those codes." Ibid., Pt. 2, p. 951.

occasional message. Colonel Sadtler, who was in daily intimate contact with "magic," was deeply interested and concerned. He believed that war was coming very soon. When he found that General Olmstead was planning once more to start on his delayed trip to the Caribbean area,

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Sadtler tried to dissuade him. Olmstead was leaving on December 2, taking with him Colonel Bickelhaupt and Major Harold O. Bixby, an officer from the personnel Division whom Olmstead was planning to assign in Trinidad. Colonel Sadtler thought positively that war would be declared before General Olmstead returned and that it was the Chief Signal Officer's duty to be in Washington. Olmstead answered that he was going anyway, and that that was all there was to it. ²⁰

²⁰ Ibid., Exhibit 147, Pt. 34 (Sadtler), pp. 87-88.

Colonel Sadtler was in daily contact with his Navy counterpart, Admiral Noyes. At about 9:30 on the morning of December 5, Noyes called Sadtler and told him "the message is in," or words to that effect, and asked him to inform G-2. ²¹ Colonel Sadtler asked Admiral Noyes which

²¹ Ibid., Pt. 10, pp. ~~4528-4559~~ and Pt. 29, pp. 2427-2433.

message it was, and Noyes replied that he thought it was the Japanese-British. Colonel Sadtler immediately went to General Miles' office, just down the hall from his own in the Munitions Building, and reported the information. General Miles called Colonel Bratton in, and Bratton after hearing the news, suggested that this message might be another false alarm. He asked Sadtler to get verification of it from the Admiral. Colonel Sadtler therefore returned to his office and called Admiral Noyes on the secret telephone connection between the two offices. Noyes said

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that he would be unable to verify the message at the moment because he had to attend a meeting, but that he would do it later. Colonel Sadtler answered that later would be too late. ²²

22 Ibid.

Sadtler reported this latest conversation to General Miles, and then returned to his office very much disturbed. To him the winds execute message meant war, and he had no doubt that this was indeed an execute message. He felt that a warning should be sent to all overseas departments. The more he thought about it, the greater concern he felt. Sitting down at his typewriter, he typed out a draft of a message he intended to recommend be sent to the overseas commanders in the Philippine Islands, Hawaii, and Panama. As Sadtler remembered the message four years later, it read:

Reliable information indicates war with Japan very near future stop take every precaution to prevent repetition of Port Arthur stop notify the Navy stop Marshall. ²³

23 Ibid., Pt. 35, p. 209.

Technically, Sadtler had discharged his responsibilities when he had reported the original call from Admiral Noyes to General Miles. But Sadtler

was a man of action, and he was convinced that this message was real, and that the overseas commanders ought to be warned. With this in mind, he want to see General Gerow in War Plans Division, General

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Staff; he repeated his story, and suggested that a warning be sent to Panama, the Philippines, and Hawaii. General Gerow said he thought that the commanders in those areas had had ample notification, and the matter was dropped. Still dissatisfied, Colonel Sadtler made one more attempt. He went to see the secretary of the General Staff, Lieutenant Colonel Walter B. Smith, who he knew would have direct access to General Marshall, and again told his story. Smith asked Sadtler what he had done, and upon learning that Sadtler had already talked to G-2 and to War Plans, Smith said he did not wish to discuss it further. ²⁴

²⁴ Ibid., Pt. 10, pp. 430ff, and Pt. 29, p. 2431.

Sadtler did not show his proposed warning message to either Gerow or Smith. Unfortunately, the message was lost. Colonel Sadtler later checked with members of his office staff; none had any recollection of the message, or indeed of his having written it. Colonel Sadtler typed the message himself, made no copy of it, and did not know what became of it, although he had intended to keep it. ²⁵

²⁵ Ibid., Pt. 35, Clauser Investigation, Affidavit of Colonel Otis K. Sadtler, p. 209.

Of the many aspects of the Pearl Harbor attack, probably none confused the subsequent investigating groups more than the conflicting testimony regarding the "winds" messages. ~~SECRET~~ Example of the Roberts

Commission, all investigators probed into the matter, and all concluded that no true "winds" execute was in fact broadcast prior to December 8. As for the Sadtler conversation, General Gerow testified that he did not recall the incident, but that it was possible that Sadtler had told him of "an unverified report," or that he had received "some tentative information that was subject to confirmation."²⁶ Nor did Colonel Smith recall Sadtler's visit to his

26 JCC Hearings, Pt. 35, Clausen Investigation, Affidavit of Lieutenant General Leonard T. Gerow, p. 1625.

office. It was not a matter over which he would have had any responsibility, he said, since it was a controversy between the chiefs of intelligence and war plans, and both would have had direct access to General Marshall. Smith added that he himself was not an "ultra" officer, so that Sadtler could not have given him any information which would have persuaded him to take the initiative.²⁷ Colonel Bratton remembered Sadtler's visit to Gerow's

office, and corroborated the essential details. Bratton added that he did not see Sadtler again about the matter, but did call the Navy and the Signal Intelligence Service to ask if any winds message had been received, and was told that none had come in.²⁸ Admiral Noyes did not

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28 Ibid., Pt. 9, p. 4521.

recall talking to Sadtler, although he said that he might have done so, because he did talk to him almost every day. Noyes was convinced that the message was not a true execute.²⁹

29 Ibid., Pt. 10, p. 4733. The Army continued to monitor for an implementing message until after the attack. Only one execute, broadcast from

Tokyo JL^{G4} and JZJ on December 8, 1941, and picked up by the FCC monitoring station is accepted as completely authentic. It conformed to the code in all respects, and apparently was intended for the Japanese embassy in London, since it mentioned only Britian. American intelligence officers interrogating the head of the Japan Radio Broadcasting Corporation after the end of the war confirm that no winds execute message was broadcast until after the attack had begun, and that this message mentioned only England. Report of the Joint Committee on the Investigation of the Pearl Harbor Attack, Appen E, P. 476.

Following his second telephone conversation with Admiral Noyes about a possible "winds" execute message, Colonel Sadtler did nothing further to ascertain from Admiral Noyes or anyone else the exact wording of the intercept. So far as he knew, nothing more was done by the Army to get additional information from Noyes, but he assumed that the basis of the information he

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had received from Noyes was an actual execute message, which according to standard practice would be transmitted without delay to G-2 of the Army. 30

30 JCC Hearings, Pt. 35, p. 96.

Since the next day, Saturday, December 6, fell on an even-numbered date, the Army was responsible for processing "magic" messages. Early that morning, Tokyo filed a message which was intercepted by a Navy station at about 7:20 A.M., and which informed the Japanese ambassadors in Washington that the Japanese Government would forward a long memorandum for the United States Government. It would be sent in fourteen parts, and the envoys would be informed by still another message when they should deliver it to the United States Government. 31

The Navy sent this "pilot" message in code to the Army at five minutes past

31 Ibid., Pt 12, p. 239

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noon. Signal Intelligence Service civilian employees ordinarily worked only until noon. By three o'clock, the persons still on duty had decoded, translated, and typed the message. There was of course no way of knowing what would be in the memorandum when it came, but Colonel Minckler called up Major Shukraft, who had been ill and off duty that morning, and asked him to come in and stay until the expected message arrived. Shukraft did come, and stayed all night. Working with him was a civilian, Frank B. Rowlett, later lieutenant colonel, who at that time was the assistant

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chief of the code and cipher section.

By the middle of the afternoon, 13 parts of the expected message were in, but there was nothing significant in them. ³² Both services

³² Ibid., Pt. 12, pp. 239-245.

scanned all incoming messages anxiously, and there was a feeling that somehow they had missed the fourteenth part. Actually, they had not; it came in late that night, filed twelve hours after the first parts, and in a different code. ³³ At any rate, by 9 o'clock Saturday night the first

³³ Ibid., Pt. 10, (Shukraft), pp. 4929-4930 and Pt. 12, p. 245.

thirteen parts, had been decoded, typed and passed along to Colonel Bratton's office. Colonel Bratton and Colonel Dusenbury were on duty that night, and Bratton stayed until all or nearly all of the thirteen parts had been received, but decided that there was nothing particularly alarming in them. The Navy distributed the thirteen parts of the message that night to the White House, and to the high-ranking Navy officials on the "ultra" list. General Miles happened to be dining with Admiral Wilkinson, his Navy counterpart, and saw the message. Other than Colonel Bratton and General Miles,

it does not appear that the message was delivered to any other Army men that night. ³⁴

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34 Ibid., Pt. 10, Testimony of Colonel Rufus S. Bratton, pp. 4507-4628.

At 2:38 A.M. on December 7, there was filed in Tokyo and intercepted by a Navy monitoring station between 3:05 and 3:10 A.M. the fourteenth and final part of the Japanese message. As subsequently decoded by the Navy, the significant part of the message read:

The Japanese Government regrets to have to notify hereby the American Government that in view of the attitude of the American Government it cannot but consider that it is impossible to reach an agreement through further negotiations. ³⁵

35 JCC Hearings, Pt. 12, Exhibits, Record of Intercepts, p. 245.

The fourteenth part was available in the Navy Department for distribution at some time between 7:30 and 8 o'clock Sunday morning, December 7. The Navy delivered this part to the White House and to Secretary Knox shortly before 10 A. M. The War Department started delivery to its officials and to the State Department at 9 A. M..

Even if the fourteenth part of the Japanese memorandum had not clearly indicated the imminence of war, two "magic" intercepts which followed would have removed all doubt. The last one contained final instructions to the Japanese embassy concerning the destruction of codes and secret papers:

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After deciphering part 14 of my No. 902 and also Nos. 907, 908, and 909, ~~please destroy~~ at once the remaining cipher machine and all machine codes. Dispose in like manner also secret documents.

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This came in shortly after another even more significant intercept, the "one o'clock" message, and was distributed at approximately the same time. The "one o'clock" message said:

Will the Ambassador please submit to the United States Government (if possible to the Secretary of State) our reply to the United States at 1:00 P.M. on the 7th, your time. ³⁶

36 Ibid., Pt. 12, p. 248.

This dispatch was filed by the Japanese at 4:18 A. M. on December 7, and intercepted by the Navy monitoring station at Bainbridge Island in the state of Washington at 4:37 A. M. It was decrypted and available in the Navy Department at about 7 o'clock, but there was no Navy translator on duty at the time, so the Navy sent the dispatch over to the Army for translation. It was returned at about 9 o'clock.

Thereafter, throughout the morning, the fourteenth part of the long message, the "one o'clock" dispatch, and the codes destruction message were distributed to various military officials as they came into their offices. In the Navy Department, officers were discussing the implications of the 14-part message when the "one o'clock" message was handed to them. As was routine procedure, the men set up a time zone chart, on which the "1:00 P.M. your time" was translated into San Francisco, Honolulu, Manila and Tokyo time. In the course of delivery to Secretary Hull's office, a naval aide mentioned that 1 P.M. Washington time was about dawn at Honolulu

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and the middle of the night in the Far East. But no one deduced that the message meant an attack on Pearl Harbor. ³⁷

37 Ibid., Pt. 8 (Captain McCollum, USN), pp. 3393-3396, 3428, 3436-3437 and (Captain Kramer, USN), pp. 3910-3912.

The Army's chief of Far Eastern intelligence, Colonel Bratton, came down to his office between 7 and 8 o'clock. There he saw the fourteenth part of the long message, and sent it over to the State Department. Around nine o'clock, the "one o'clock" message was placed in his hands. Colonel Bratton had been waiting for some indication of where or when the Japanese would launch aggressive action. To him, the "one o'clock" message spelled out one of the answers, as to time. The next hours were confused and hectic. Bratton launched a series of hurried conferences and telephone calls. The sequence of events is not entirely clear, but at any rate, when he called General Marshall's quarters, the General's aide informed Bratton that the Chief of Staff was horseback riding, as was his Sunday morning custom. Marshall apparently returned almost immediately after the telephone call, notified Bratton that he would be at his office within a few minutes, and did in fact arrive shortly after 11 o'clock. In the meantime, General Gerow and General Miles had arrived at their offices

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and had seen the messages. 38

38 Ibid., Pt. 10 (Bratton), pp. 4609-4628 and Pt. 11 (Marshall), pp. 5175ff, and Pt. 2 (Miles), p. 926.

General Marshall agreed that the "one o'clock" message meant trouble. He wrote out a message in longhand to be sent to his field commanders as an additional warning to those they had already received. Before sending it, he called Admiral Stark to confer with him. Stark felt that the Navy commanders had received sufficient warning and hesitated to say anything more lest he confuse them. However, before Marshall had finished writing the message, Stark got in touch with Marshall and asked him to add to the

dispatch the usual expression to inform the Naval officers. General Marshall added this portion to his longhand draft, to be sent to the Western Defense Command, the Panama Command, the Hawaiian Command and the Philippine Command. It read:

The Japanese are presenting at 1 P.M. Eastern Standard time, today, what amounts to an ultimatum. Also they are under orders to destroy their code machine immediately. Just what significance the hour set may have we do not know, but be on the alert accordingly. Inform naval authorities of this communication. 39

39 Ibid., Pt. 3 (Marshall), pp. 1105-1116.

Marshall handed the draft to Colonel Bratton with instructions to take it to the message center to be dispatched immediately. As he left the

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office, Bratton heard Gerow say, "If there is a question of priority, give the Philippines precedence."

In his office at the War Department Signal Center, Lieutenant Colonel Edward F. French was on duty, as he had been every Sunday morning for several weeks. The volume of work in the center was very heavy, and demanded his attention most of the time; besides, he felt it his duty to be on hand during so critical a period should any "unforeseen circumstance" arise. 40 When

40 Ibid., Exhibit 143, Pt. 23, Testimony of Colonel Edward F. French pp. 1102-1105.

Bratton came in, obviously excited, and asked to go into the code room, telling French that the Chief of Staff had a very important message to send "by the fastest safe means." 41 French took charge personally. He

41 Ibid., Pt. 9 (Bratton), p. 4519ff.

set his code men to work at once, and left Bratton in the code room while he went to the operating room to check the Honolulu circuit, which had been fading out that morning. The Hawaiian Department had regularly scheduled radio communication with the War Department, but both were on the air all the time, and supposedly Washington could reach Fort Shafter any time. However, both station WAR in Washington and WTJ at Fort Shafter had only 10-kilowatt transmitters, powerful enough to maintain contact under good atmospheric conditions, but unreliable because of static interference and fading if conditions were poor. Lieutenant Colonel Carroll A. Powell, the Hawaiian Department signal officer, had asked for a more powerful set, such as the 25-kilowatt station the Navy had, but the Army had only recently

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been released from its previous agreement with the Navy to use stations of no more than 10-kilowatt power, and lack of funds, coupled with lengthy procurement procedures, power, had prevented the remedying of what Powell considered a definite military weakness.⁴² At 1:40 in the morning, Hawaii had been in direct contact with Washington, clearing corrections. The

⁴² Ibid., Exhibit 143, Pt. 22 (Powell), pp. 237-249.

readability was four, which was very poor. By 4:20 conditions were so bad that signals were not clearing, and Hawaii shifted to another frequency, from 8160 kilocycles to 12240 kilocycles, in an attempt to hear. By 5 o'clock, Hawaii was unable to hear Washington on the 12240 frequency, and at 7:20 it shifted to 12090, and a little later to 12075, hoping to break through. At 7:30 it shifted once more, this time to 1600,⁴³ and heard Washington

⁴³ Ibid., Pt. 22, p. 238. Presumably Colonel Powell was speaking of 1600 megacycles, and should have said 16,000 kilocycles.

again, but interference from the San Francisco station, WY, made it impossible to get any messages through or to maintain unbroken contact.

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At five minutes past nine o'clock, Washington told Hawaii it would relay through San Francisco. ⁴⁴

44 Ibid.

Colonel French was responsible for choosing the means of transmission for the vital message Bratton had handed him. There were three things to consider: speed, accuracy, and secrecy. Of these, French considered accuracy most important; he had cautioned his operators in setting up the coded message to be sure that there were no errors in it, because he did not want it garbled. The second consideration, speed, he decided would be most easily met by commercial transmission by way of San Francisco. He had two circuits available, Postal Telegraph and Western Union-RCA. If he chose Postal Telegraph, the message would have to go to New York, be relayed through the multiplex machine in Chicago, and then sent to San Francisco, with relay from that point to commercial cable, and transmission to Hawaii by cable. Western Union had a direct wire to San Francisco, and a tube across the street there to the RCA facilities, a powerful 40-kilowatt station. He knew also that there was a teletype line direct from the Honolulu office of Western Union to the signal office at Fort Shafter. What he did not know was that the teletype would not be in operation on Sunday morning, and that the warning when it arrived would be delivered by hand messenger. ⁴⁵

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Bratton had delivered the handwritten message into French's hands at 11:50. Eleven minutes later, the War Department Signal Center had typed it for clarity, had it authenticated by Bratton, encoded it, and filed it for transmission with Western Union; sixteen minutes after that, the teletype transmission had been completed and the message was on its way to Hawaii from San Francisco. RCA in Honolulu received it at 1:03 P.M. which was 7:33 A.M. Hawaiian time. It took 46 minutes en route, the maximum of the time that Colonel French had estimated when he told Colonel Bratton that it would require from thirty to forty-five minutes to reach Hawaii.

Meantime, General Marshall had sent Bratton back to the Center to inquire once more whether the messages would reach field commanders before the one o'clock deadline mentioned in the Japanese intercept. Marshall waited in the deepest concern; no one had told him that the Army circuit to Hawaii could not be used. On his desk was a scrambler telephone, which renders conversation a hash of meaningless sounds, unscrambled at the receiving end, but as Marshall testified later, it did not occur to him to use the telephone, although with it ^{he} could have reached the field commanders in a matter of minutes. The scrambler telephone was considered "private" but not "secure," which is to say that it could be tapped by enemy agents, and if the "one o'clock" message had in fact meant a break in diplomatic relations and not an attack, an intercept of the Chief of Staff's conversation might have upset the delicate balance of international relations, and might also have revealed to the Japanese that the Americans possessed "magic." ⁴⁶

⁴⁶ Ibid., Exhibit No. 143, Pt. 23, Roberts Commission (Marshall), p. 1081.

As for Colonel French, the scrambler telephone was not a facility over which he had any control; it was used only by the Chief of Staff, and in any event

French would have considered it unsuitable for the transmission of classified messages. ⁴⁷ There were other facilities that French could have used, however.

⁴⁷ Ibid., Exhibit No. 145, Pt. 27, APHB, pp. 105, 110 and Exhibit No. 143, pt. 23, Roberts Commission, pp. 1102-1105.

either to send the message originally or to repeat it. He knew that the Navy had a much more powerful radio transmitter, and he had upon occasion sent messages to Hawaii via the Navy facilities. But he assumed that since the Army channel was unusable, the Navy would be having difficulty that morning, too. It would have taken time to check with the Navy, and in any event, the Navy would have had to deliver the message from their facilities at Pearl Harbor to Army headquarters at Fort Shafter, delaying delivery

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still further. French did not know that a third radio transmitter belonging to the Federal Bureau of Investigation was available, and was in fact clear that morning. ⁴⁸

⁴⁸ Ibid.

Whether the course of events would have been altered, and in what way, had another means of transmitting the message been chosen, must remain forever supposition. "It was the failure of communications and not the selection of an improper channel that occasioned the delay." ⁴⁹

⁴⁹ Congress of the United States, Report of the Joint Committee on the Investigation of the Pearl Harbor Attack (Wash., D.C., 1946), p. 226.

3. The Attack on Pearl Harbor

In Hawaii, the Department ~~SECRET~~ officer, Lieutenant Colonel Powell,

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was resting from a trip to the mainland, from which he had returned on December 4. He had gone to observe radars at work in field training maneuvers, at continental aircraft warning sites, and in the laboratories; since his assignment to Hawaii in October 1940, he had been actively pushing the development of the Aircraft Warning Service in the islands. In training exercises with the Navy and the Air Corps, his radars had performed well; the "attacking" planes from an aircraft carrier had been detected 80 miles away, and the "defending" pursuit aircraft had been