

SRH-005

USE OF CX/MSS ULTRA

BY THE UNITED STATES

WAR DEPARTMENT

(1943 - 1945)

DECLASSIFIED BY SP-10  
BY SP-10/10/78

WR4

12/19/78

USE OF CX/MSS ULTRA BY THE

UNITED STATES WAR DEPARTMENT

(1943 - 1945)

CONTENTS

	Page
Introduction	3
A. The Historical Background	4
B. Use Prior to 5 June 1944	11
C. Use Subsequent to 5 June 1944	16
1. German Military Reports Branch	16
2. European Order of Battle Section	24
D. Some Problems	29
Appendix I: Ultra Representatives of MIS in the European Theatre	31
Appendix II: European Summary of 11 April 1945	35
Appendix III: Tab D to European Summary of 17 November 1944	53

Introduction

The position of the United States War Department during the war was somewhat different from that of the other Ministries considered in the course of this historical project as recipients and users of signals intelligence. The War Department had not only a position comparable to that of the War Office as a recipient and disseminator of intelligence, but also a function akin to that of GC & CS as a producer and distributor of intelligence. For the purposes of this paper only the first of those capacities will be considered, and within that scope the emphasis will be on the use of CX/MSS Ultra, with only incidental reference to the use of other signals intelligence, whether produced in England or in the United States. The other and larger portion of the story of the War Department's functions -- the interception, traffic analysis, cryptography and processing of signals intelligence produced in the United States -- will be mentioned only in cases where its development had a direct bearing on the Ministerial function of exploiting intelligence concerning the European war.

Even within the limited sphere indicated above a comprehensive description cannot be written. The remoteness of the War Department and its secondary intelligence duties concerning the European war meant that the primary use of CX/MSS Ultra lay in its influence in the minds of high ranking representatives in strategic councils. This paper cannot state what influence the intelligence had at that level but can only describe what information was brought to the attention of those officers, and how and to some extent why.\*

---

\* This subject is discussed further in section D., below.



A. Historical Background

When the United States entered the war on 7 December 1941, it had made only a haphazard beginning in the field of signals intelligence. Despite an outstanding success in the solution of Japanese diplomatic systems, exploitation of the field as a whole was in the most elementary stages. In addition to the many limitations on all the technical aspects of production, both the derivation of intelligence from intercepted signals and the method of presenting the derived intelligence to the responsible authorities in Washington were ineffective; and there was no arrangement for passing the intelligence to commanders in the field promptly and in a manner which would ensure security.

After the attack on Pearl Harbour, and the realization that the event had been foreshadowed in the Japanese diplomatic traffic of 1941, the Secretary of War concluded that intercepted traffic had not been given sufficiently close attention, and that some agency should be set up to deal with the material in a more thorough-going fashion than had previously been thought necessary. His decision resulted in the appointment of Mr. Alfred McCormack as Special Assistant to the Secretary of War on 19 January 1942. Mr. McCormack's instructions were, briefly, to study the problem and to determine what had to be done in order to make certain that all possible useful intelligence was derived from this source. The result of the ensuing investigation was the establishment (after several other temporary arrangements) of Special Branch, MIS, in early spring 1942. This branch, under Colonel (later Brigadier General) Carter W. Clarke as Chief, and Colonel McCormack as Deputy Chief, was charged with intelligence exploitation of intercept material and exercised a limited amount of guidance over the US Army Signal Corps in its activities of interception, traffic analysis, cryptography and communications. Whatever



success MIS did have in the employment of Ultra intelligence is largely attributable to the efforts and leadership of these two men.

Before looking at the development of Special Branch, it is necessary to say a few words about the organization of the Military Intelligence Service, an organization which falls outside the regular chain of command pattern of the United States Army. MIS was established to procure, evaluate and disseminate intelligence to the War Department General Staff, the three Major Commands (Army Air Forces, Army Ground Forces and Army Service Forces) at home, the theatres abroad, and certain civilian governmental agencies outside the War Department. It was under the control of the Assistant Chief of Staff, G-2 (Intelligence), and hence was attached to, although not a part of, the War Department General Staff. The Signal Corps was subordinate to the Commanding General, Army Service Forces, and its activities in the field of signals intelligence were not placed under the direct control of the AC of S, G-2 until a late date in the war. At the time of the establishment of Special Branch in MIS the Intelligence Group of MIS was organized on a geographical basis, with the chief of each theatre branch responsible for the official views of MIS on intelligence matters within his area. Special Branch, being set up to handle all signals intelligence, became in effect an overlay on each of the theatre branches, covering the same ground but working always with its own material which had a higher security classification than that handled by the theatre branches. When Special Branch confined itself to the spot reporting of individual items or messages appearing in signals (particularly Ultra) traffic, there was but little duplication of effort. When, however, Special Branch moved into the field of long-range studies or comprehensive intelligence appreciations, it inevitably had to draw on the theatre branches

for background and complementary material, and some duplication of effort became apparent immediately. In such cases the conclusions reached by Special Branch were more valuable than those of other branches which were based on less authoritative sources.

Over a year passed between the time of the establishment of Special Branch, and the time when it effected the liaison with GC & CS which was to lead to the use of CX/MISS material in the War Department. In that period, considerable progress had been made towards the effective reporting of intelligence derived from the traffic (mainly diplomatic) made available by the Signal Corps. For the purpose of this paper the important development was the establishment of the "Magic Summary" (later to be called the "Magic-Diplomatic Summary") as a daily medium for reporting this intelligence. That summary was a carefully prepared publication covering both the important spot intelligence to be gleaned from each day's batch of messages, together with the necessary background and evaluation, and the conclusions arrived at from long-range studies of the traffic. Its regular readers included the top officials of the War Department who had

previously seen the messages themselves -- the Secretary of War, the Chief of Staff, the AC of S, CPD (Operations and Plans Division), and the AC of S, G-2. In addition, at the Navy's request, a copy was going to the Secretary of the Navy, and at the State Department's request copies were going to the Secretary of State and to the Assistant Secretary of State who followed signals intelligence.

In spring 1943 the US Army acquired the full benefit of British experience in the Sigint field. Before that time there had been some exchange of cryptographic information between the Signal Corps and GC & CS, but there had been neither a full understanding of the British pro-



duction and dissemination of Sigint nor a regular exchange of material for intelligence purposes. In April 1943 Colonel McCormack, accompanied by Mr. Friedman of the Signal Corps and Lt. Col. (later Colonel) Telford Taylor of MIS, came to England and made a two months' survey of British operations. A full description of the results (on the intelligence side) of that mission is contained in the JUS chapter of The History\*, which sets forth the original agreement between the two nations, dated 17 May 1943. It will suffice here to summarise the arrangements made then and thereafter for passing intelligence on the European war to the War Department.

The original agreement provided that (1) US liaison officers with access to all decoded material would examine messages and summaries at GC & CS and select those desired for transmittal to Washington for the AC of S, G-2, or to theatre commanders; (2) the decodes or summaries were to be passed to Washington through existing British channels; and (3) American officers properly trained and indoctrinated at GC & CS would act as liaison officers in the field for passing Ultra intelligence to American commanders. (Duties of the various liaison officers in Europe are discussed briefly in Appendix I.)

Although excerpts from diplomatic traffic were sent to Washington by a liaison officer, and signals based on the traffic of the German secret intelligence services were sent to Washington by liaison officers at GC & CS, the first signal containing CX/LSS was not transmitted until 27 August 1943. Difficulties arose immediately because of a specification in the original agreement that information regarding order of battle was to be transmitted through US liaison officers

\* See TAB A, SRH-110



at the War Office and Air Ministry only. Following a month of further protracted negotiations and intermittent service an agreement was reached on 25 September after which a conservative selection of CX/MSS items began to flow from Hut 3 to Washington. The appropriate Ministry was informed of each item passed.

From this time on the service to Washington gradually increased both in volume and in its responsiveness to the needs and desires of the War Department. In addition to the items sent by cable, others not considered sufficiently urgent or important to warrant that service were sent by pouch. The pouch travelled by steamship until 12 June 1944, when a thrice-weekly service by aircraft was instituted, resulting in both a more rapid and a more regular delivery of the material to MIS. In September 1944 it was decided that all CX/MSS was to be sent to Washington by pouch, the cable service continuing for items which were timely. No further change was made until mid-February 1945, when MIS began to receive signals direct from the Hut 3 Watch in the same manner as did commands in the field. Thereafter the function of the US liaison officers in 3 US was merely to review what the Watch had sent to Washington and to supplement it with other material for which Washington had a particular desire but which was not of the kind ordinarily sent to commands.

The principles of selection for material to be passed to Washington by cable were never formalised and made definite. What was sent depended largely on the judgement of 3 US officers aided by the advice of others members of Hut 3 and occasionally by messages from Washington. The primary interest of MIS was, of course, strategic, but it also desired current operational news items. In addition to the

008

material from intercepted traffic, MIS received significant appreciations or comments by Ministries or commands. These were generally selected by the liaison officers in 3 US, but certain high-ranking intelligence officers at commands did, on occasion, specifically state that they wanted some of their appreciations passed to G-2 Washington. Items in the C series of CX/MSS were passed to Washington only after clearance by the head of Hut 3 (Group Captain Jones) and then were addressed to three specific recipients: the Chief of Staff (General Marshall), the AC of S, G-2 (General George V. Strong, and later General Clayton Bissell), and the Special Security Officer (General Clarke). After August 1944 the Director of Intelligence, MIS (Colonel McCormack) was also a recipient for these signals.

While the service to Washington was developing, several organisational changes were made in MIS which affected the handling of the material which had been received. When traffic concerning the German military organisation began to be received, a new section, known as Section C, was set up in Special Branch to handle and report that material. In early July 1943 this consisted of two officers. They began to publish the Military and Naval Supplement to the Magic Summary. At the beginning their product was exceedingly scrappy because most of the information came from a daily War Office summary of order of battle changes, and a weekly Air Ministry summary of German Air Force developments. As the service expanded the section grew, acquired intelligence officers, writers, editors, a small service section to keep appropriate indexes etc., and sufficient background knowledge



to be able to make sense of and explain in layman's language significant military developments in the European theatre.

Until 5 June 1944 this Section remained the only one in MIS which handled and processed the CX/ISS material received from GC & CS. On that date a complete reorganisation of intelligence went into effect, by which MIS was divided into three Directorates, entitled Administration, Information and Intelligence. Although the Director of Information nominally handled both the acquisition and dissemination of information whereas the Director of Intelligence was concerned only with evaluation and presentation, this paper can adequately be confined to the operations controlled by the latter. Under the Director of Intelligence were a Research Unit and a Reports Unit (the title of each of which is largely self-explanatory) and a number of "Specialists". The Specialists were senior intelligence officers who were to be free from the daily burdens of administration, research in a mass of undigested material and writing of periodicals, so that they could concentrate unfettered on the long-range developments and important changes in enemy capabilities and intentions.

After the reorganisation CX/ISS material went to the European Order of Battle Section of the Military Branch in the Research Unit, and to the German Military Reports Branch in the Reports Unit. The German Military Reports Branch was largely staffed with former members of Section C of Special Branch. The Specialists ordinarily received CX/ISS information only after it had been digested and presented to them by the European Order of Battle Section, or by the German Military Reports Branch; most of it reached them in the continuing daily written publication



of the latter branch. Specialists also occasionally received direct copies of appreciations from Ministries or commands.

B. Use Prior to 5 June 1944:

As stated in the introduction, this description must, of necessity, be confined largely to the mechanics of intelligence work at the War Department. For a number of reasons, among which remoteness and the merger of Anglo-American forces in the field were paramount, the War Department had relatively little to do with the processing of intelligence concerning the European war. By general agreement Washington was the centre of intelligence activities for the Pacific war whereas the comparable task for the European war was undertaken in England; the demarcation applied to the preparation of comprehensive appreciations and maintenance of a general intelligence picture as well as to the other side of War Department functions, the production of Sigint. This allocation of functions did not mean that MIS did not send its periodicals, order of battle publications, etc. to US commands in Europe, but it did mean that MIS was free of most operational questions and primary responsibility. Confronted with an urgent intelligence problem, AFHQ was wont to request or receive advice from the War Office or the Air Ministry in the first instance; the War Department was consulted only secondarily and rarely.

Without a working level commitment on the use of Ultra to aid the forces in Europe, the first responsibility of MIS when CX/MSS material began to arrive in the summer of 1943 was to bring the important intelligence to the

attention of the high officials in whose possession it might have a bearing on strategic decisions yet to be made. What influence it did have could be stated only by the officials concerned, and even they would probably have some difficulty in stating today that any one decision depended on any one piece of evidence.\* This paper can only discuss the methods by which the intelligence was made available in an easily understandable form and the purposes which guided the selectivity and presentation of the intelligence officers working on it.

Section C of Special Branch from its beginning concentrated on the production of the Military and Naval Supplement to the Magic Summary. This daily publication was always based primarily on Ultra. Most of the material used was CX/ISS but information from clandestine, attache or regular diplomatic sources was included when that information was primarily military in nature. Non-Sigint material appeared infrequently and then only in explanatory notes and background discussions, but its presence always was an important factor in the determination of what important information was known only from Ultra and consequently was worth reporting. The rule was laid down and observed that the special Ultra publications would not be used for reporting items known from other sources (unless, of course, the Ultra version differed, was more complete, or added credibility to a story otherwise doubtful).

---

\* In the use of Asiatic intelligence, where Washington had a primary role, and in the exploitation of diplomatic traffic, where Washington's part was independent, it is of course easy to list decisions made and to trace some of them to a basis of information from Sigint.



Largely because of the more stringent security regulations pertaining to CX/MSS, the Military and Naval Supplement never had so wide a distribution as did its parent publication, the Magic Summary. In September 1943 the Military and Naval Supplement was distributed, outside MIS, only to the Secretary of War, the Chief of Staff, the AC of S, OPD, and the AC of S, G-2. By June 1944, just before the reorganization, the list had been lengthened within the War Department to include the Commanding General, Army Air Forces, the Deputy Chief of Staff, the Assistant Chief of Air Staff, Intelligence, and the Deputy AC of S, G-2. Outside the War Department copies were going to Mr. Roosevelt, to Admiral Leahy, Chief of Staff to Mr. Roosevelt in the latter's capacity as Commander in Chief, and to Admiral King, then Chief of Naval Operations and C-in-C, US Fleet. All recipients were required to return their copies of the Supplement to Special Branch for destruction immediately after reading, and a careful record was kept. Deliveries and collections were made only by an indoctrinated officer courier of Special Branch, using locked pouches.

At the beginning Colonel McCormack devoted a good deal of time to editing the daily Supplement to ensure that its reporting would be quickly intelligible to the busy readers and would at the same time be free from bias. Important order of battle developments and changes in German plans and commands in all areas were reported, as was all significant information concerning developments on the little-known eastern front. Running stories were produced on several German operations, notably the reconquest of Cos and Leros. A month's research on the intercept material concerning resistance activity in Yugoslavia



and Albania resulted in the publication of a 100-page study of the order of battle of partisan forces, their operations and effectiveness.

In the main the work of Section C was uneven and its function uncertain. The Section had no responsibility for maintaining continuous order of battle data. It was inadequately staffed and the daily burden of reporting (undoubtedly a certain number of trivial items which can have meant little to the readers were reported) prevented thorough study or correlation of information from other sources. The Section was further handicapped by having to train officers, who were transferred to England by the time they had become familiar enough with the material to be of any use in the War Department. The most serious drawbacks to its operations were those imposed for security reasons: (1) its members could not freely consult MIS officers or sources outside Special Branch, and (2) its product, the Military and Naval Supplement, did not reach the chiefs of the theatre branches, who spoke as MIS authorities and who most needed the Ultra information.

From mid-autumn 1943 until June 1944 there was a steady improvement in the calibre of the daily Supplement, largely because of an influx of new writers and editors with intelligence and open and inquisitive minds. This was made possible, after much struggle, by a priority given by the War Department to the personnel needs of Special Branch. The major commitment of the Section remained the issuance of the daily Supplement, but it also provided an Ultra disposition map for the oral and visual presentation conference held each morning for the AC of S, G-2. This map showed German dispositions, command and impending changes on the Italian front, the only European battle-zone in which

US troops were then engaged. As the readers of the Supplement indicated a desire for up-to-the-minute information on the various battlefronts, German messages concerning operations, particularly in Italy, were reported in some detail. Some spot intelligence items taken from one or a few messages had a self-evident strategic importance, without a necessity for detailed research. Examples were reports of tours of western European defenses and some reports of air-raid damage. German appreciations, intentions and dispositions in western Europe were followed closely. The readers of the Supplement demanded this information, regardless of the limited extent of their influence at that time on the imminent invasion by SHAEF.

Of more long-range importance were studies of the German plans to expand the Parachute Army and the Waffen-SS and to employ the GAF ground divisions, of the collaborationist activities of certain Cetnik troops in Yugoslavia (contrasted to the inadequate information on these forces from some other sources), and of the Russian and German conduct of the 1944 Crimea campaign.

An amusing sidelight was furnished by the verbatim reporting of an appreciation issued by Genfeldm Kesselring in Italy late in the spring of 1944. His message mentioned the disturbing and harassing effect which American war-dogs, used for patrol duties, were having upon the German soldiers in the front line. When General Marshall, the Chief of Staff, had read the Supplement containing this message, he requested that Section C prepare (with the source of the



information completely concealed) a letter of commendation for his signature to the founder of K-9 Corps.

By the time of the reorganisation Section C was able to report competently the significant operational information contained in CX/MSS material received by the War Department. It had not, however, done much with the information which might more properly have been its province, the study of logistical data and the correlation of various sources of information affecting the future of German manpower and supply position. Furthermore, it was not giving an adequate training to those who were going overseas to act as Ultra intelligence officers. Nor did it yet influence the appreciations issued by the chiefs of the theatre branches of MIS.

C. Use Subsequent to 5 June 1944:

1. German Military Reports Branch:

The German Military Reports Branch fell heir to the primary duty of Section C, the daily publication of the Military and Naval Supplement which on 1 July 1944 was renamed the "Magic European Summary". The new Branch had a number of other duties which will be mentioned below, but they were never allowed to interfere with the daily publication. The Branch consisted of a Chief with one assistant, an editorial section of three men, an Air Forces section of three officers, a Ground Forces section of six officers, a Service section containing six people, and one cartographer. All except four of these people had been recruited to staff Section C of the Special Branch; the personnel standards applied in choosing both those and the other four were stated to



be analytical ability, judgment, scholarship and imagination. Previous training in intelligence was a secondary consideration and little or no consideration was given to familiarity with superficial facts about a particular area of the world, knowledge of a foreign language, or an extensive military background. Knowledge of German would have been some help, and a few members did possess it, but the fact that CX/MSS material sent from Hut 3 had been emended and translated by competent German linguists largely obviated the need.

The designation of specific editors to supervise the work of competent and adult writers was necessitated by the level of the distribution list of the European Summary; the recipients' time could not be wasted on unimportant subjects. The editors' regular work, in addition to looking into questions of organisation, style and clarity of expression; involved a critical examination of contributions to determine such things as (i) whether the importance of a subject was such as to justify treatment in greater or less detail than had been given by a report draft, or whether the subject merited reporting at all; and (ii) whether the evidence sufficiently supported the conclusions set out in the report draft. They also consulted with the Director of Intelligence and the Chief of the Branch regarding material to be exploited, subjects to be emphasised, and priorities to be followed in processing intelligence.

The European Summary continued to be based on Ultra (largely CX/MSS) information which formed about 90% of its content. The other 10% was taken from operational cables, P/W reports, photo-reconnaissance reports, agents' reports, and Allied and enemy radio news-casts, newspapers and communications.

By a working arrangement with the European Order of Battle Section in the Military Branch, most of

the necessary basic filing and indexing was done by that Section. The German Military Reports Branch, however, kept the following additional Ultra records to facilitate its work:

(i) Two complete sets of the daily European Summary with an elaborate card index.

(ii) Two complete sets of the Ultra signals received from GC & CS (the single set of the material received by pouch was kept by the European Order of Battle Section).

(iii) Temporary working maps showing various kinds of information -- very detailed ground and air order of battle for a particular sector or area; divisional, corps, army and army group boundaries; rail and road nets; airfield serviceability; jet aircraft bases under construction; V-weapon sites; serviceable bridges over rivers; etc.

(iv) Detailed running lists of information on units of particular and temporary importance (e.g. divisions of 6 Pz Army in the winter of 1944-1945, GAF jet units, etc.)

The range of subjects covered in the European Summary was limited only by the range of topics discussed in Ultra messages, which was very wide indeed. The bulk always dealt with activities of the German armed forces but the details were many and varied. In place of any attempt to describe the topics covered, a copy of the Summary, dated 11 April 1945, is reprinted as Appendix II hereto. The copy shows the heading with its security warning to all readers, and the distribution list which then consisted of eleven people within the War Department above the working intelligence level, and four recipients outside the War Department, including the Deputy Director of Military Intelligence at the British Army Staff in Washington. In its original form that copy consisted of 25 pages, of which 16 concerned



western front developments, 3 eastern front developments, and 6 news of the Italian front. The bulk of the Italian front section was a condensed version of an appreciation based on Ultra information and issued by G-2, AFHQ, two days before the Summary was published. It will also be noted that while the information on the western front emanated from high level German sources and was even at that late date in the war important for the future campaign, it was primarily operational in nature.

To redress the balance somewhat, and to indicate the more ambitious projects undertaken by the Branch, a study of jet-propelled aircraft originally produced as a tab to the European Summary on 17 November 1944 has been reprinted as Appendix III hereto. This study was written by an RAF Wing Commander with an extensive intelligence background, who was nominally a liaison officer but actually a working member of the Branch. It differs from other similar studies produced only in that it made a somewhat more extensive use than was customary of non-Sigint information to give a complete picture of what was then known in HIS of jet-propelled aircraft. After the Assistant Chief of Air Staff Intelligence and the Commanding General Army Air Forces had read this study, the writer produced at their request a sanitised version for use of the Army Air Forces experimental centre working on American jet-propelled aircraft at Wright field. The sanitised version contained all the information which was available from non-Sigint sources. The selectivity used in preparing it was of course largely guided by the writer's Ultra knowledge.

Tabs to the European Summary consisted of long messages or studies not all of which might be of interest to all the readers. The body of the Summary always con-

tained a brief description of the content of each tab so that the reader might decide for himself whether he wished to read further. In late autumn 1944 so many tabs were being written that the average daily Summary was 30 or more pages in length. General Clarke then discovered that a number of readers, apparently from a desire not to miss any important information, were going through the tabs written designedly for other recipients. Henceforth, long and specialised studies were produced as memoranda always with a description in the body of the Summary but with the actual memoranda being furnished only to certain readers and to the others only on request (e.g. long studies on the GAF went in the first instance only to the AC of S, G-2, the Deputy AC of S, G-2, and the AAF recipients).

It is perhaps unfortunate that the two examples chosen for the appendixes contain no maps. Maps and charts formed an integral part of the European Summary which on some days contained as many as three or four of them. They were used in clarification of, or as a substitute for, textual material.

At various times one or more of the regular recipients of the Summary was absent from Washington for a period of a week or more. If the security considerations prevented forwarding to the reader his copy, he then either received the accumulated back numbers on his return or, at his desire, the German Military Reports Branch condensed the important items which had been reported in his absence. When the Chief of Staff accompanied the President to the Yalta Conference, an officer of the German Military Reports Branch went with him to receive and present to him a very few selected items which it was considered necessary for the Chief of Staff to receive. This service was more



limited than that given to the CIGS and the Prime Minister at the same time.

The service provided to General Marshall at Yalta was simply an extension of the basic policy of the writers of the European Summary to provide the readers with the intelligence they desired to have and with such other intelligence as the writers thought they should receive. In the latter field the writers made repeated attempts to produce long-term studies and appreciations. Examples of these were (i) analyses of new German divisional identifications with an attempt to assess the rate of replacement and growth of the German army; (ii) extensive annotations to logistical estimates produced by G-2 SHAEF and forwarded to the War Department; (iii) studies on special topics of which the jet aircraft paper appearing as Appendix III was probably one of the more successful. These attempts were subject to two handicaps. First, the European Summary was designed primarily as a medium for reporting current CX/ISS information and not for the free-lance writing of intelligence appreciations. Hence the writers were necessarily limited by what the source was producing currently even though that may not always have been the answer to the needs of intelligence. Secondly, the burden of reporting operational intelligence in answer to the desires of the readers was always so great that insufficient time was left for analytical studies of background intelligence.

The desires of the readers took various forms. The only formalised channel for such requests came from the Army Air Forces which had appointed a full-time liaison officer to duty with the German Military Reports

Reviewed Dec. 11, 1979

Branch. Among other things he made known the interests and desires of the Assistant Chief of Air Staff Intelligence and the Commanding General Army Air Forces; subjects in which such an interest had been expressed were either treated in detail in the European Summary or made the basis of special Ultra reports to the two interested general officers. Other readers occasionally made informal requests. One desired that any German comments concerning American artillery spotter aircraft should be reported. On another occasion, in July 1944, a reader requested that a story should be published, illustrated by maps, showing the movement of divisions in the west into the Normandy beachhead and the numbers and locations of divisions in France and the Lowlands remaining outside the battle-zone. In general, the staff of the German Military Reports Branch exercised a free selection of the material to be reported, but it was never allowed to neglect operational information.

At various occasions during the war special annexes to one of the Ultra Summaries were published for distribution within the War Department only. These were entitled "Sources, Security and Related Matters" and dealt with the obtaining of Ultra, its revelation of enemy intelligence activities, etc., so that the readers would have a better understanding of the problems involved in producing and safeguarding signals intelligence and the lessons to be learned.

Several dealt with reports that the Japanese might be obtaining information from American wireless traffic. Another analysed German and Japanese intelligence on US and British war-time production.

In the closing days of the war, when an increasing number of CX/LSS items were being placed in the



restricted C series, the messages from Hut 3 containing those items were too voluminous and ambiguous to be given in undigested form to the four named recipients in the War Department. Accordingly, several officers in the German Military Reports Branch under the personal supervision of Colonel McCormack processed those items and presented them in intelligible form in a special publication

Copies went only to Colonel McCormack, the three designated general officers in the War Department, and to DMI B&S. These signals were not shown to anyone else in the German Military Reports Branch, nor to anyone outside the Branch.

In addition to the publication of the European Summary, the German Military Reports Branch had a number of other tasks which involved the use of Ultra. The Diplomatic Summary continued to be published by another branch throughout the war, based primarily on diplomatic and clandestine traffic. Although security restrictions forbade the use of CX/ISS material in that Summary, its articles concerning the European war were customarily, although not invariably, cleared with members of the German Military Reports Branch so that information known to be wrong would not be given further distribution without qualifying comment. When European diplomatic and attaché messages received by other sections of IIS were solely military in nature they were ordinarily published in the European Summary. At those times CX/ISS was explicitly used to evaluate the intelligence.

The Air Force desk of the German Military Reports Branch published a special weekly estimate of the capabilities of the GAF for the Commanding General Army Air Forces. It also reviewed and republished the weekly

Air Ministry Estimate of GAF Order of Battle. The European Order of Battle Section produced for dissemination to American commands at home and abroad a Weekly Order of Battle Bulletin of enemy ground and air forces in Europe and a Monthly Order of Battle Estimate of enemy ground forces in Europe. These publications, which were classified Secret, were reviewed, revised, and published by the German Military Reports Branch, so that they should not include any information known from Ultra to be wrong. Ultra was used as a guide in the selection of items to be included in these publications, but it was never included openly or used as the basis for statements which could not have been reasonably supported on the basis of other evidence.

2. European Order of Battle Section:

The European Order of Battle Section of the Military Branch, as part of the Research Unit of MIS after the reorganisation, had an assignment (1) "to study, evaluate, and collate all incoming information pertaining to order of battle in the European theatre and to provide the intelligence produced therefrom to the European Specialists," especially for presentation at the morning intelligence conference of the AC of S, G-2, and (2) "to produce special studies relating to various aspects of strength, identifications, dispositions, operations or personalities or such other particular special studies as might be requested." Ultra intelligence was specifically used by the Section in its work of preparing for the morning conference and in the preparation of special studies which could be classified Top Secret Ultra, and only

24



those functions will be discussed here. In all other work of the Section, Ultra was used as a guide in the selection and evaluation of intelligence from other sources.

Since the European Order of Battle Section did not have direct access to the top US Army officers at the planning level similar to the access which the German Military Reports Branch had via the European Summary, the description of the operations of the Section must be even more confined to mechanics and removed from ultimate use than the preceding pages of this paper have been.

Ordinarily the Section did its work for and presented its views to the Specialists, who in turn were responsible for passing the information to the AC of S, G-2 and to others outside the Military Intelligence Service.

A great deal of the effort was devoted to preparation for the morning intelligence conference. This was an institution similar to but rather more elaborate than the comparable procedure followed in the War Office for the daily briefing of the CIGS. Each morning officers of the European Order of Battle Section presented to the Specialists brief summaries of the intelligence and military operational news received during the preceding 24 hours. The Specialists then added their comments and, aided by large and elaborate portable maps and charts, relayed the information to the AC of S, G-2 who in turn presented what he considered most significant of it to the Chief of Staff at a later conference. It has been estimated that 35% of the items so presented were taken from Ultra traffic. Of the remainder about half came from operational cables from Allied commands abroad and the other half from all other sources together. An enormous amount of time and labour went into the preparation of this information. It was an answer to the specific request of the Chief of Staff, and through him and the

Secretary of War some of the intelligence presumably reached the President. But again, the amount of effort expended was such that the staff of the European Order of Battle Section was precluded from making intensive long-term studies of the enemy war potential in Europe.

The special studies produced by the Section were primarily designed to aid in the planning of future operations. Some of the studies requested by the Chief of Staff, the AC of S, G-2, or the JIC could be classified Top Secret Ultra and could include all Ultra material openly. But such requests were rare. When studies were requested by the Operations and Plans Division of the War Department General Staff (of which only the Chief was in the Ultra picture) they could not include Ultra information and it could be used only as a guiding influence. Since the Operations and Plans Division was concerned primarily with the Japanese war, restrictions on the intelligence to be given to it were not such a severe handicap on the European Order of Battle Section as they were on the other sections of MIS dealing with Far Eastern intelligence. But the fact that working-level officers in the Operations and Plans Division were not indoctrinated did interfere somewhat with effective co-operation.

Over a period of time and after strenuous efforts on the part of all concerned the German Military Reports Branch and the European Order of Battle Section broke down the barriers between them and merged into what amounted to a single team. Although their efforts continued to be directed toward different productions of intelligence, this merger did lead to a completely free interchange of information and opinion, and to consistent agreed interpretations and evaluations of important intelligence.



Three of the sub-divisions of the European Order of Battle Section deserve special mention. An officer from the British Army Staff in Washington was assigned as a liaison officer to the German Ground desk to provide continuous and complete interchange of German order of battle intelligence with the War Office. British reports received through him (many of which contained Ultra) included monthly location lists showing units and commanders, weekly lists showing the distribution of German divisions and the order of battle changes of the preceding week, special studies prepared by the War Office on any aspect of the German army or para-military organisations, periodic cables, Middle East summaries, Balkan summaries, etc. Through him, and by exchanges of cables with the War Office, significant differences of interpretation were discussed and it was possible for the War Department and the War Office to reach a substantial agreement on German order of battle both at the Ultra level and at the Secret level. By this means, American commands in the European theatre were kept from receiving conflicting advice from the War Office (through SHAEF) on the one hand and from the War Department on the other.

Reviewed Dec. 11, 1979

One very small sub-division of the European Order of Battle Section did deal with more long-term topics concerning the shape and future of the German armed forces. It is not believed that the results achieved were sufficiently definite to have any effect on American planning. Similar work was performed in greater detail by another MIS office which did not have access to Ultra; the product of the work of that office was, of course, given a wider distribution.

Extensive files were kept in the European Order of Battle Section, to which members of the German Military Reports Branch had access. The only permanent files which contained Ultra were a complete set of CX/MSS material received by pouch from GC & CS and a card index largely confined to information on units of the German army and GAF.

All maps, notes, special studies, etc. produced by the Section which contained Ultra information were carefully recorded and were distributed only by officer courier. They were all returned for destruction either to the Section or to an Ultra control office in MIS.

Physical security restrictions on both the European Order of Battle Section and the German Military Reports Branch were extremely tight. All doors to both offices were locked, except one at which a duty officer was on guard twenty-four hours a day. No case is known



of entry by an unindoctrinated person, nor of the possession by such a person of any CX/MSS information.

D. Some Problems

Important generalisations and lessons for the future are virtually precluded by the limited scope of this paper; what effect the knowledge of CX/MSS information had on the American leaders in Washington is beyond its province. Certainly it was proper that those leaders should receive the information, and every effort was made to get it to them in a comprehensible and evaluated form.

A few points in the field of intelligence operations, however, are worthy of mention. MIS experience showed that officers handling Ultra material, which covered an extensive number of fields in a somewhat cryptic manner, had to have imagination coupled with analytical, judicial and unbiased minds. Intellectual ability was more of a prerequisite than any experience, military or otherwise. With the proper people the work could be done effectively, after an unavoidable period of delay in which the organization was built, the people trained and the necessary background knowledge acquired. Even with qualified people the German Military Reports Branch and the European Order of Battle Section could not accomplish all that they desired to do. The demands of reporting operational information prevented the study over a period of intelligence which might have been a guide to the future. Either more intelligence officers should have been provided or the operational reporting should have been kept down to a point at which it did not interfere with the other, potentially more valuable, task.

In MIS, as in most other intelligence organisations during the war, there were a number of channels through which reports concerning the European war could flow out to recipients without proper co-ordination. Although strong efforts were made to remedy this defect, the efforts were not completely successful. It is believed that all reports should be prepared according to prescribed standards and should be reviewed by a small staff set up for that purpose. This remedy ought not to lead to rigidity but it ought to prevent the issuance of ambiguous statements or those known from more highly classified sources to be wrong.

The work of intelligence officers in MIS was handicapped by a lack of knowledge about Allied operations, actual or projected. Security was allowed to exercise too much influence. Intelligence cannot exercise its proper function if it does not know what is needed.

Finally, MIS did suffer at some times because no appreciations of possible and probable enemy actions were being issued. The responsibility for making such estimates (periodically or otherwise) must be clearly defined, and the work of background research or of reporting current operations must not be allowed to take the place of overall appreciations of the enemy.



APPENDIX I

Ultra Representatives of MIS in the European Theatre.

Representatives sent from MIS to handle Ultra material in the European theatre had two objectives: (1) to provide to MIS in Washington Ultra intelligence produced in Britain, and (2) to provide Ultra intelligence to American commanders, intelligence officers and State Department representatives in Europe. These functions were separate from those of the Signal Corps men who worked with the British on technical and cryptographic problems at GC & CS and elsewhere.

The work of the US liaison officers handling CX/MSS material in Hut 3 is described in the 3US chapter

and will not be further mentioned here.

The MIS mission to Britain in April 1943 resulted in the establishment of Special Branch officers

Regarding the former, Commander Denniston handed to Colonel McCormack in May 1943 an informal memorandum outlining his concept of what the American liaison should be. After stating that there should be a full exchange of cryptographic information on code-books, key-tables etc. regarding enemy countries, he recommended that the Sections should mark to the MIS liaison officer all items "considered of interest and value to G-2 precisely as in the case of British Departments," and that the liaison officer should forward to Washington by GC & CS channels any items which he or the authorities considered should go to American recipients.

A liaison officer has been stationed since June 1943. He has read all decoded messages produced and has sent a cable to Washington each night (over British link) containing any messages which he

\*See SRH-110

had reason to believe Washington might not have. In practice this included all important messages except Washington terminal traffic. All traffic not cabled to Washington was sent there by British pouch. Aside from consultation on routine cryptographic questions which never bulked large in the duties of this officer, he received several additional tasks. He served as a medium for exchange of material between MIS and the Ministry of Economic Warfare. He relayed information from diplomatic Ultra to the American Ambassador in England (sometimes by oral presentation), to Mr. Robert Murphy, General Eisenhower's political adviser, while the latter was in the United Kingdom, and to Mr. James Dunn, the Assistant Secretary of State, during several conferences in London. He also assisted in the service to Mr. Murphy when on the Continent and to Mr. Jefferson Caffery, the American Ambassador, in Paris, of information of political and economic importance primarily from the diplomatic traffic. There has been at all times a reserved series of diplomatic messages controlled by the Foreign Office which were withheld from circulation to Washington. The number of items placed in this category has been small and it has never been a serious handicap to cordial relations.

Also in the summer of 1943 a Special Branch officer was assigned to a liaison position where he followed matters of interest to the War Department and transmitted to Washington through British Security Co-ordination channels paraphrases of Abwehr *Sicherheitsdienst* and ~~Sicherheitsdienst~~ messages. Like the diplomatic traffic forwarded these were frequently the basis for articles in the Diplomatic Summary and less frequently in the European Summary. Some of the messages, particularly those bearing on South America, were of great



value in Washington.

Other American army representatives were members of the Office of Strategic Services, which also furnished counter-intelligence units to the American commands on the Continent. The OSS representatives were by agreement kept from access to most operational Ultra material, and hence their participation

was somewhat limited. In April 1945 the MIS liaison officer and one British officer were installed in a special office to handle operational Ultra (including CX/MSS). They distributed this material to the limited number of persons permitted to handle it assisted in the preparation of the weekly SCI cable for SHAEF and of the monthly summary of trends in the German Intelligence Service. The MIS liaison officer

was removed at the end of the European war.

The other MIS representatives in the European theatre were engaged in providing intelligence primarily based on Ultra to high ranking American officers and State Department officials. The work of those who were attached to the American commands during the war is described in the paper entitled, Synthesis of Experiences in the Use of Ultra Intelligence by US Army Field Commands in the European Theatre of Operations. That paper excludes consideration of the officers attached to SHAEF and USSTAF. Since both of those organisations were atypical, it is believed that few valuable lessons for the future can be learned from a description of the mechanics and the way in which they handled Ultra. One other officer prepared Ultra target intelligence at the Air Ministry, but his function again was unique and could normally have been discharged by a regular Air Ministry officer. The synthesis should provide most of the general lessons to be learned from American experience.

It remains to describe only the duties of the officers stationed at Paris to service Ambassador Caffery and at

Frankfurt to service Mr. Murphy, the political adviser for Germany. In both cases military commanders also were receiving the benefits of the service, but since their work was akin to that described in the synthesis only the State Department representatives will be mentioned here.

In Paris the officer saw Mr. Caffery two or three times a week, presented to him copies of the actual

messages,

which were most important in the discharge of his duties. The important passages in the messages were marked so as to save the Ambassador's time in reading.

Other items

\_\_\_\_\_ were covered orally with an attempt being made to keep the Ambassador fully covered on major developments in Europe. The Diplomatic Summary which was received by the Liaison officer in Paris was not shown to the Ambassador. CX/MSS material was not used. The Ambassador frequently discussed at some length developments revealed by the diplomatic material and made special requests concerning what he wanted brought to his attention in the future.

The service given to Mr. Murphy at Frankfurt and later at Berlin was concerned primarily with political information \_\_\_\_\_ and was similar to that given Mr. Caffery. When Mr. Murphy moved to Berlin, and the secure signals station where the material was received remained in Frankfurt, the liaison officer had to memorise the significant material, make frequent trips to Berlin from Frankfurt, and present it orally.



APPENDIX II

EUROPEAN SUMMARY OF 11 APRIL 1945\*

No. 45-101

Copy No.---

By Auth.

NOTE: No one, without express permission from the proper authorities, may disseminate the information reported in this Summary or communicate it to any other person.

Those authorized to disseminate such information must employ only the most secure means, must take every precaution to avoid compromising the source, and must limit dissemination to the minimum number of secure and responsible persons who need the information in order to discharge their duties.

No action is to be taken on information herein reported, regardless of temporary advantage, if such action might have the effect of revealing the existence of the source to the enemy.

The enemy knows that we attempt to exploit these sources. He does not know, and must not be permitted to learn, either the degree of our success or the particular sources with which we have been successful.

---

\* This appendix is an exact copy of the European Summary except that the page numbering has changed because of a difference in the size of paper used. On the original the words "TOP SECRET ULTRA" were printed in black and red at the top and bottom of each page, and the security warning beneath the title on the first page was printed in black and red. Back references to "ES" refer to previous copies of the European Summary. Footnotes to the AFHQ appreciation are those which appeared in the Summary.

1. Western Front:

a. Reorganization of Armed Forces chain of command:

An order issued by Hitler late on 7 April made sweeping changes in the organization of the chain of command in the West. Operational control of the Front is now divided between C-in-C West and "C-in-C Northwest," command of the forces in the Ruhr pocket is separated under Army Group "B", and those HQs, plus Naval Chief Command West, are subordinated directly to the OKW. In addition, a new command, "C-in-C Netherlands," has been set up in preparation for "the defense of Fortress Holland"

Hitler's order prescribed the boundary between C-in-Cs West and Northwest as a line running eastward from Paderborn to Schönebeck (7 m. SE of Magdeburg).

Details of the reorganization directed by the order are in substance as follows:

(1) Subordinated directly to the OKW

- (a) "C-in-C Northwest (Army Group 'H')"
- (b) Army Group "B"
- (c) C-in-C West
- (d) Naval Chief Command West

(2) Subordinated to C-in-C Northwest:

(a) "The former sphere of command of Operations Staff North Coast," the staff of which is made available to C-in-C Northwest.

(b) "C-in-C Netherlands, to whom the Twenty-fifth Army, Commander Armed Forces Netherlands, Admiral Netherlands, and GAF forces in Holland are subordinated." C-in-C Netherlands "is personally responsible to Hitler for the defense of Fortress Holland; as soon as land communications to the Reich are cut, the ((previously announced)) comprehensive regulations regarding Fortresses will govern his



relations with the Reich Commissar for Occupied Areas of the Netherlands."

- (c) Armeegruppe Student
  - (d) First Parachute Army
  - (e) Wehrkreis XI
- (3) Subordinated to C-in-C West:
- (a) Army Group "G" (with the First and Seventh Armies)
  - (b) Eleventh Army
  - (c) Nineteenth Army
  - (d) Wehrkreise V, VII, IX, and XIII.
- (4) Subordinated to Army Group "B":
- (a) Fifth Panzer Army
  - (b) "Fifteenth Army (Armee Abt. von Lüttwitz)"
  - (c) All other units and personnel of all branches of the Armed Forces in the Army Group area (Ruhr pocket).
- (5) GAF tactical forces: The organization of GAF tactical forces employed in the West is to conform to the organization of the field army. A GAF command staff is to be linked with each of the ground commands (presumably Luftflotte Reich in the north and GAF Command West in the south--ES 9 Apr 45). In addition, all flying and Flak units supporting the field army are to be subordinated operationally to C-in-Cs Northwest and West respectively. GAF support of Army Group "B" will be arranged specially.

b. Location of HQs following the command re-organization:

- (1) C-in-C West moves southeast: On 28 March the HQ of C-in-C West was in a tunnel at Milseburg,

10 m. E of Fulda (ES 2 Apr 45). The next day Genobst. Jodl, Chief of the OKW Operations Staff, stated that the area west of Ohrdruf (9 m. S of Gotha) was envisaged as an HQ location for C-in-C West "in case of need" (ES 4 Apr 45). On 10 April, the following message was sent by an unidentified authority:

"As of 0800 hrs on the 10th, the temporary battle HQ of C-in-C West is in Hirschau ((40 m. E of Nürnberg and about 100 m. SSE of Ohrdruf)). The final battle HQ (special train D) will be reported later."

(2) Blaskowitz moves to W Holland: On 8 April Genobst. Blaskowitz reported that his new battle HQ was at Hilversum (15 m. SE of Amsterdam, and 145 m. SW of Oldenburg where Blaskowitz, as C-in-C Army Group "H", had had his HQ two days earlier).

(3) Army Group "H" in Bremen area: Also on the 8th, the HQ of Army Group "H" was reported to be at Vielstedt, 15 m. W of Bremen (a move of 14 miles southeast from its former location at Oldenburg).

c. Possible new commanders: Hitler's order of the 7th did not identify the incumbents of the newly created posts, but slight suggestions are afforded by the language of the order and subsequent messages. Although Blaskowitz has been C-in-C Army Group "H" since February, the move of his HQ to western Holland seems inconsistent with his assumption of the command into which that Army Group has been merged, and is rather an indication that he may be the new "C-in-C Netherlands."

Genfläm. Busch, who has been CG Operations Staff North Coast, is a likely incumbent for "C-in-C Northwest." Hitler's order specified that this high command was to have subordinated to it "the former sphere of command of Opera-



tions Staff North Coast," and on 8 April C-in-C West addressed to "C-in-C Northwest, via Operations Staff North Coast" an inquiry as to when command over Army Group "H", including Armeegruppe Student and Wehrkreis XI, "can be taken over."

It is assumed that Genfldm. Kesselring continues as C-in-C West, Genfldm. Model as C-in-C Army Group "B", and Admiral Krancke as Naval Chief Command West.

d. Harz sector:

(1) Appearance of a new Army: On 9 April C-in-C West stated:

"Hitler has ordered the Harz ((Massif)) as the assembly area for the Twelfth Army. The foremost division of the Twelfth Army is the 85th Inf Div....((portion missing)).... Any intervention by C-in-C West, the Eleventh Army, or other staffs, is expressly forbidden...."

Note: The new Army is to assemble in the region which Wehrkreise IX and XI have been ordered to prepare for defense (ES 10 Apr 45).

On 2 April Hitler stated that six divisions "being set up" were to assemble in the area Hannover - Northelm - Brunswick--which is just northeast of the Harz and which is now being overrun by the Allies. That order said that "the later tasks of this Army will be ordered at the proper time" (ES 6 Apr 45).

On 26 March the cadre personnel of the 85th Inf Div, which is being set up anew inside Germany, were ordered to move from a troop training ground north of Würzburg to one just west of Berlin.

(2) Units to be refitted on the edge of the battle zone:

(a) Also on 9 April, C-in-C West subordinated the 394th Assault Gun Bde, which was assembling just north of the Harz Massif, to the Eleventh Army. The order stated that the Bde was to be rested and refitted, and that guns were to be provided as quickly as possible.

• Until its "operational capacity" was restored, the Bde was, "within the scope of the Harz defense, to take over defensive and blocking tasks in its rest and refitting area."

(b) On the same day (the 9th) C-in-C West ordered that a battle group of the 9th Pz Div to be transferred to the area of Sangerhausen (20 m. E of Nordhausen) for "further rest and refitting." While there, the battle group was also to "prepare for defense, take part in constructing blocking positions, and operate if the Allies attack."

(3) Kesselring order to the Eleventh Army on 7 April:

"(i) In order to gain time, the Eleventh Army, using no more forces than are necessary, must fight a battle of bitter delaying resistance on its western front, the rear of which rests on the Harz Massif and the mountainous country to the west. This gain of time will serve to make the strong sectors behind the Army's front capable of defense and to develop the Harz Massif into a blocking Schwerpunkt of the first order.

"(ii) It is of utmost importance for the Army, with all speed, to shift to its southern wing the forces which are to be economized on its front facing west. Then, driving toward Langelsalza and Gotha [respectively 10 and 20 m. SE of Mühlhausen], those forces can fall on the Allied flank with adequate striking power.



"(iii) At the same time it is most important to take immediate countermeasures to forestall the possibility of the Army's western front being rolled up from the north and south. This means that, on the north, all roads and tracks in the area Gronau - Alfeld and to the west [i.e., an area about 20 m. S of Hannover] must be rendered impassable with adequate defense; and, on the south, the Allies, as they feel their way northward from Mülhausen, must be attacked on the flanks. Here the Eleventh Army's conduct of operations must be adjusted to the utmost mobility and flexibility.

"(iv) The area Nordhausen - Sonderhausen - Kelbra - Schmöcke Depression ((i.e., east and northeast of Mülhausen)) must be turned into a firm defensive block. Farther west, local strongpoints such as Uslar, Hardegsen, Northeim, Adelebsen, Harste, Göttingen, Dransfeld and Witzenhausen ((all northeast and east of Kassel)) must be so strongly developed and adequately manned that they will hold firm under efficient Officers Commanding Local Operations. Because of the Allies' well known by-passing tactics, the flanks of these places must be covered and adequately protected. Covering forces in effective strength, with patrols out to the sides to prevent surprises, must be in position at least 1½ kilometers in front of blocking sectors. The Allies must be brought to a dead stop in this system of blocks"

Note: By 10 April Allied troops had overrun the Gronau - Alfeld area and the local strongpoints above Kassel, thus rolling up the western front of the Eleventh Army from both the north and the south.

e. Situation in the Ruhr pocket:

(1) Army Group "B" day report, 7 April:

"On the northern wing of the Fifteenth Army only weak forces, comprised of Volkssturm personnel and factory guards,

are available to block Allied penetrations. Strong Allied armored forces continued to attack Dortmund, and in the northeast reinforcements for Group von Lüttwitz were unable to stop Allied gains. Losses of the 116th Pz Div were considerable.

"Repeated attacks against the eastern front of the pocket resulted in several penetrations, and the Pz Lehr Div, which has been pulled out of the line, will have to be thrown into battle again to prevent a breakthrough and to clean up the situation around Schmallerberg.

"The over-extended Sieg front is particularly strained because of the weakness of the 35th Inf and 62nd VG Divs and because the 363rd VG Div has many Volkssturm troops in its ranks. As a stiffening measure, the 183rd VG Div is being exchanged with the 62nd and 363rd VG Divs, beginning tonight.

"On the Rhine front the battalion of the U.S. 82nd Airborne Div which crossed the River yesterday was smashed in a counterattack, and 75 prisoners were taken.

"In spite of all expedients adopted by the Army Group, and the direct influence of the C-in-C and all responsible commanders, the German power of resistance is insufficient at some individual points. The supply of ammunition for the artillery, which is bearing the main weight of the fighting, is of greatest importance. If the requested air transport does not materialize, there will be a considerable strain on the supply of ammunition in the next few days."

(2) Defense of Strongpoint Unna: At noon on 9 April the Officer Commanding Local Strongpoint Unna (10 m. E of Dortmund) reported that he had received instructions to hold the town "to the last round of ammuni-



tion." He stated that the garrison consisted "for the most part of a former SS signal training battalion, two battalions of artillery, one battalion of Flak, and some Volkssturm troops and Armed Forces stragglers."

f. Orders to destroy "V-2"'s: On 8 April the Chief of Staff of C-in-C West stated that a train with undamaged V-2('s) was reported to be standing near Bromskirchen (45 m. S of Paderborn). "It is essential that the train be destroyed. Army Group 'B' will report on the possibility of destroying it with demolition and sabotage detachments. The task is to be performed at the earliest possible moment. Special honors will be given if the attempt is successful."

On the same day an unidentified command ordered that the same train be destroyed by an air attack "in case of danger of capture."

Note: Press reports of 6 April stated that tanks of the U.S. 3rd Armd Div had captured a trainload of V-2's, presumably in the Paderborn area. Allied cables report that the captured material consists of 9 V-2's, 84 warheads and 50 fuses.

g. Army Group "G" sector:

(1) Stragglers of the 6th SS Mtn Div:

On 9 April the Senior SS—and Police Commander for the Main district stated that "further columns of the 6th SS Mtn Div have arrived," and requested a decision as to where they should be sent.

Note: On 6 April GAF Command West had ordered one of its units to "exhaust all possibilities of aerial reconnaissance to locate the 6th SS Mtn Div" (ES 9 Apr 45).

(2) Civilian demonstration: On 7 April Army Group "G" reported to the OKW that "disruptive popular demonstrations" were taking place in front of the town hall in Gerolzhofen (11 m. SE of Schweinfurt).

h. More Hitler rules for operations:

(1) ES 9 April 45 reported a 2 April Hitler order prescribing secrecy, concentration of strength and speed as the principles valid for every attack. The following introductory sentence of that order has now been recovered:

"I emphasize daily that attacks on the flanks of Allied attacks which have broken through are to be made quickly and forcibly in order to exploit the Allies' weakness. It is, however, completely false to draw the conclusion that attacks, no matter where they may be, should be made too soon, that is, before adequate forces are assembled."

Note: It must be difficult for front line commanders to interpret Hitler's last sentence above, in the face of other statements of the same date by Kesselring and Hitler himself (ES 9 Apr 45):

By Kesselring: "The essence of these flank attacks lies in speed of decision and execution. If they are carried out immediately with the necessary audacity and weapons, even though with relatively slight forces, they will bring decisive success. On the other hand, the only effect of waiting and delay is that decisive success cannot be achieved even though two or three times as many troops are used."

By Hitler: "The sooner an attack is carried out the greater is the prospect of success, whatever its time or place."



(2) On 8 April Genobst. Jodl stated:

"Today Hitler has again issued an emphatic reminder of the following aspects of the conduct of operations:

"(a) In view of the Allies' present method of conducting operations, attacks on Allied flanks provide the only possibility of slowing down the speed of attack. Numerous reports in the last few days have shown that these flank attacks have successful results when carried out skillfully and without hesitation.

"(b) Reports from the front prove that numerous HQ's have allowed themselves to be impressed by the events of the last few weeks so that their vitality and energy have been sapped. Commanders-in-chief and subordinate commanders must regard it as their main task to combat the poison of inaction by personal influence, by example, and by ruthless hardness."

Note: The need for commanding officers of resoluteness and initiative, which has been the subject of a number of recent messages (ES 7, 9 Apr 45), may have led to the OKH order to army groups to provide their own officer replacements and to Kesselring's order of an officer comb-out of rear echelon staffs and Wehrkreise (ES 10 Apr 45).

Orders for Western Front operations are showing an increasing emphasis on the doctrine of flank attacks (ES 2, 3, 6, 8, 9 Apr 45 and item 1d. (3) of today's ES) and on a concurrent dictum that only relatively weak forces are to be disposed for frontal blocking against Allied thrusts (ES 7, 9, 10 Apr 45). The latest available message reiterating the old doctrine of defense of every foot of German soil and resolute frontal defense against Allied spearheads was dated 4 April (ES 7 Apr 45).

i. Conservation of vital routes for evacuation of material: On 7 April C-in-C West informed the Eleventh Army and Wehrkreise VI and IX of an OKW order for the conservation, "until the last moment," of RR's, road bridges and signal facilities leading east from certain vital war production areas. The message stated that the transportation of machinery and materials to the east was to be guaranteed "until the battle situation makes unavoidable" the destruction of the transport and signal installations.

The factories and production areas specified were:

(1) The Zeiss works at Jena. (Most of the precision optical instruments required by the armed forces are manufactured by the Carl Zeiss works in Jena, 26 m. E of Erfurt.)

(2) The Erfurt - Nordhausen area. (The most important production installation in this area is the elaborate underground factory system just north of Nordhausen, comprising "V-2" assembly plants and a Junkers engine factory producing both Jumo-213 engines and Jumo-004 turbo-jet units--ES 10 Apr 45.)

(3) The Osnabrück - Bremen area, where "there are still materials for infantry ammunition."

The message stated that the transport and signal installations were to be crippled or destroyed only upon agreement with "the competent Commissioner for the Defense of the Reich."

j. New Flak guns made available to the GAF:

An OKL order quoted by Luftflotte Reich on 2 April directed that all Flak guns which had been allocated to the GAF and which were available in factories and depots west of the Weser R. and of the line Schweinfurt - Nürnberg - Augsburg were to be furnished directly to



individual GAF installations in the area. The order added that the GAF units also were to take over guns allocated to the Army or Navy if those branches were unable to make use of them.

2. Eastern Front:

a. West Prussia - Pomerania--Russian concentrations and troop movements:

(1) On 30 March Army Group Vistula stated that the Russians were believed to have five to seven rifle armies and two tank armies, with a total of 1,200-1,800 tanks, in the area between Schwedt (30 m. S of Stettin) and Frankfurt.

(2) On 5 April an intelligence report from the Third Panzer Army (lower Oder sector) stated that

(i) 1,000 Soviet motor transport vehicles had been observed by air reconnaissance to be moving from the general area of Danzig toward the west; (ii) according to "Y" service reports, four Russian artillery divisions were on the march from the Danzig - East Prussian area to the west; and (iii) the first elements of the Second Belorussian Front had arrived in the Stettin area. That Front would probably control the Oder sector from the Baltic to south of Greifenhagen (12 m. S of Stettin).

Note: (1) As early as 22 March, German intelligence estimates discussed the probability that the Second Belorussian Front would move from the Danzig area to the lower Oder sector immediately after the fall of Danzig and Gdynia, and that the Third Belorussian Front (East Prussia) would then take over whatever remained of the sector around Danzig Bay. The Orders of the Day for the capture of Gdynia and Danzig indicated that three of the ten armies of the Second Belorussian Front may

already have been withdrawn from the line by the end of March.

(ii) The four Soviet artillery divisions which the Third Panzer Army reported to be on the march from the Danzig area represent at least 800 guns, and probably two-thirds of the GHQ artillery strength of the Second Belorussian Front.

(iii) The concentration of 7-9 Soviet armies (the greater part of the First Belorussian Front) in the sector between Schwedt and Frankfurt indicates that the Third Panzer Army's estimate that Marshal Rokossovski's Second Belorussian Front will take over the sector from south of Greifenhagen to the Baltic is probably correct.

b. Evacuation of German units from East Prussia:

A report of 5 April by the Fourth Army on units being transported away from East Prussia listed the HQ of Army Group North, two Army Corps and one Panzer Corps, the staffs of two infantry divisions and "remaining elements" of the staff of a Volksgrenadier division. The report stated that "further staffs and army troops" were to be transported away on the 9th.

A similar report of 6 April stated that the bulk of the staffs of three more infantry divisions had been transported away, together with "further elements" of Precht Pz Gr Div #2 Hermann Goring. (On the preceding day, the OKH had informed the Fourth Army that permission to retain the weapons of the Herman Goring Div could not be given until the Div's weapon stocks return reached the OKH.)

Note: German reports during March noted The withdrawal from East and West Prussia of the cadres of eight divisions, including one of the seven mentioned above (ES 23, 27 Mar 45).



3. Italy:

a. Estimate of German position: In a 9 April estimate, set forth in TAB A, G-2 Caserta discusses German plans for meeting the Allied offensive in Italy and points out that as a result of a regrouping apparently designed to maintain strong defense forces in the north Adriatic area, Army Group "C" has retained only one division in mobile reserve south of the Po. The estimate concludes that the Germans will try to hold or blunt the Allied attack and that, even if the present line is breached, they may still hope to make stands on successive river lines.

b. Fate of batteries defending Spezia: On 6 April, the day after Allied troops began a drive up the Ligurian coast toward Spezia, an unspecified German commander reported to von Vietinghoff:

"The Allies will evidently eliminate the batteries at Spezia by bombing and artillery fire, without using infantry. The batteries are therefore continuing to function as purely infantry strong-points, for which purpose they are not suited. If the Spezia guns are put out of action without infantry fighting, it is proposed that the batteries be sent to reinforce the Genoa defenses or else that the crews be assembled in the Pavia area and re-trained as infantry for employment on the main front."

For the Assistant Chief of Staff, G-2:

CARTER W. CLARKE  
Brigadier General, GSC  
Deputy Chief, MIS

Distribution:

Within the War Department  
Secretary of War  
Chief of Staff  
CG, AAF  
Deputy C of S  
Deputy Commander, AAF  
AC of S, G-2  
AC of S, OPD  
AC/AS, Intelligence  
AC/AS, Plans  
Deputy AC of S, G-2  
Chief, MIS

Outside the War Department  
The President  
C of S to the  
commander in Chief  
C-in-C, U.S. Fleet  
DDMI, BAS

Ref. ES Item 3 a.

11 April 45

Position of the German Forces in Italy

G-2 Caserta Estimate of 9 April\*

1. German expectations:

The Germans have been expecting an Allied offensive since the beginning of April ((ES 3, 10 Apr 45)). There is no indication that they estimate the pattern of the Allied attack accurately; they show sensitivity and signs of nervousness everywhere.

The area of the N Adriatic has been assuming increasing significance ((in German estimates of Allied intentions)). Despite their earlier estimates that available Allied shipping is inadequate for major combined operations ((ES 30 Nov 44)), the Germans evidently still do not exclude as an Allied capability possible landings in the rear of the main front, on the coast north of the Po, or onto the Udine plain. Moreover, the recent Russian and Partisan successes have emphasized the strategic importance of the NE Italian area as a wedge between the Balkan and Italian fronts and as a communications zone.\*\*

---

\* Received through "Ultra" channels and based in large part on information from "Ultra" sources.

\*\* MIS Note On 12 March C-in-C Southwest warned that discussions with C-in-C Southeast looking to a common conduct of operations in NE Italy and NW Yugoslavia had proved unsatisfactory and asked the OKW to work out a new strategic plan for defense of the border area (ES 17, 30 Mar 45).

On 5 April C-in-C Southwest proposed a new boundary with C-in-C Southeast along the line Tolmezzo - Lienz [25-55 m. NNW of Udine]--which would involve handing over the NE corner of Italy to C-in-C Southeast-- and added that "even that would not be satisfactory, since any Allied landing in the Gulf of Venice would probably take place on both sides of the line." An incomplete 8 April message from the XCVII Corps in NE Italy mentioned a change of subordination [to C-in-C Southeast?], with the [new Army Group?] boundary the Isonzo R., east of Udine.



2. German dispositions:

((G-2 Caserta here discusses recent "Ultra" messages on the regrouping of German forces along the N Adriatic which have included (i) the transfer from the Udine area to the Eastern Front of the 710th Inf Div (ES 9 Apr 45), six trains of which had left Italy by 9 April, (ii) the stationing of the 155th Field Trng Div along the coast 17-33 m. NE of Venice, except for minor elements possibly brought up to the area of the Po delta, (iii) the northward movement of the 29th Pz Gr Div across the Brenta R. (ES 7 Apr 45), and (iv) indications that the 29th may be subordinated to the XCVII Corps in NE Italy, but that elements are also intended for the coast above the Po.))

The German intention is possibly to establish the 29th Pz Gr Div as a strategic mobile reserve in readiness for operations either in NE Italy or in Yugoslavia or even further east.

In any event, the transfer of the 29th considerably reduces the German striking strength south of the Po; only one reserve division ((the 90th Pz Gr)) is left to seal off any penetration which the Allies may achieve, or to assist the 26th Pz Div as a mobile rear guard in the event of partial or total withdrawal.

Late "Y" and contact identifications do not indicate any adjustments now in progress for releasing additional forces for tactical reserve. Regrouping will probably take place, however, when the Germans have formed an estimate of the Allied operation. It is anticipated that as the battle develops the Germans will follow their usual stop-gap method of transferring ad hoc groups from quieter sectors.

3. Ammunition and fuel situation:

The German ammunition position is tolerably satisfactory as a result of recent economy of expenditure and deliberate accumulation of stocks ((ES 8 Mar, 8 Apr 45)). Irregular replenishment and tactical difficulties of movement are likely to bring about local shortages, however, and there is likely to be a general shortage of certain types of ammunition as a result of heavy fighting over a short period—witness the German experience of last May ((Cassino)). The fuel situation is undoubtedly strained and is likely to deteriorate under battle conditions, despite the Tenth Army's blocked stocks ((ES 8 Mar, 8 Apr 45)), but no early paralysis of movement can justifiably be expected in view of the Germans' known talent for improvisation.

4. German intentions:

The adjustments in dispositions indicate that the Germans have no plan for meeting eventualities beyond the initial Allied assault. The German preoccupation with protection of the N Adriatic requires the Tenth and Fourteenth Armies, in meeting a frontal attack, to rely almost entirely on the strength of their present defensive positions.

It is estimated that the Germans will attempt to hold or blunt the Allied attack and to inflict maximum casualties. Moreover, a breach of the present line will not necessarily cause the Germans to abandon the hope of forcing the Allies to fight a continuous series of river-line actions.

German troop morale is an imponderable factor. The large number of prisoners taken in the initial stages of the Eighth Army offensive ((1,200 up to noon of 10 April)) suggests a possible weakening of the will to resist, but in the Massa area ((Ligurian coast)) the fighting was as tough as ever.



APPENDIX III

TAB D TO EUROPEAN SUMMARY OF 17 NOVEMBER 1944.\*

Ref. ES Item 6

17 November 44.

---

\* Editor's note: This appendix is an exact copy of the tab to the European summary, except that the page numbering has changed because of difference in the size of paper used. On the original the words "TOP SECRET ULTRA" were typed at the top and bottom of each page. Back references to "ES" refer to previous copies of the European Summary and those, to "MNS" to copies of the Military and Naval Supplement, the same publication prior to 1 July 1944. Footnotes are those which appeared in the tab.

17 November 44

Jet-Propelled Aircraft

INTRODUCTION

1. Summary:

This TAB summarizes reports of recent developments in connection with the various types of German jet-propelled aircraft; the Messerschmitt-262 (PART I); the Arado-234 (PART II); the Messerschmitt-163 (PART III); and the Heinkel experimental "rocket plane" (PART IV).

2. Security of jet-propelled aircraft:

An OKL message of 27 October states that, "for reasons of security," the following "secret designations" are to be used in all teletype and telephone communications;

- (i) Aircraft- ME-262 - Silber (silver)  
AR-234 - Zinn (tin)  
ME-163 - Blei (lead)
- (ii) Power units- Jumo 109004 (power unit of ME-262)-  
Orkan (hurricane)  
BMW 109003 (power unit of AR-234)-  
Sturm (storm)  
\*\*HWK 109509 (closed-jet unit of  
ME-163)- Wind (wind).

3. Directive to German Military Attachés:

On 10 November the following directive was addressed to all German Military Attachés for their "own information only;"

"Enemy propaganda is busying itself to an increasing extent with German jet-fighters, in particular with the object of minimizing the importance of this new German weapon.

"The new German fighter aircraft type is still in the experimental stage. It is not intended to take a propaganda line before its employment on a large scale.

---

\*The order also included the unconventional DO-335 with one engine in the nose and the other in the tail (ES 2 Nov 44) which was given the cover-name "Kupfer" (copper).

\*\*Presumably H. Walter, Kiel-Walterwerke, Kiel known to manufacture these units (MNS 22 April 44).



"The following is for your information. First results are most promising. For example, in air battles over central Germany on 2 November, three enemy aircraft were shot down and, contrary to enemy propaganda, we suffered no losses. Enemy reports that the ME-262's do not give battle are in part to be accounted for by the fact that those encountered by the enemy were bomber aircraft of this type, which do not ((perform the)) task of getting involved in combat."

PART I

ME-262

1. Armament of ME-262:

On 22 October Luftgau V requested information about "the principles for stocking-up ((airfields)) for ME-262 ((operations)) according to the employment intended ((for the aircraft))." The Luftgau noted that it had been informed earlier that fighter and reconnaissance versions of the ME-262 had 4 30-mm. cannon, with 60 rounds per gun, while the bomber version had one 30-mm. cannon with 100 rounds.

Note: A P/W, who had been at Lechfeld\* for a year and had discussed the ME-262's performance with one of the best known ME-262 test pilots, reported that the armament of the fighter and bomber types consists of four 30-mm. cannon. The cannon, which were specially developed for the ME-262 and mounted in no other aircraft (except perhaps the ME-163), are fired electrically and are fitted in the nose of the aircraft. The P/W also stated that the reconnaissance version of the ME-262 carries no armament.

A 4 November message stated:

"The disintegrating ((ammunition)) belts now work perfectly. Films taken at Lechfeld show that the single empty cartridge cases drop down perfectly. For months there have been no reports of damage to the front part of the wing". This message suggests that some ME-262's have additional wing-mounted armament.

2. ME-262 units now operating:

A detachment of ME-262's has been carrying out medium-altitude daylight bombing attacks in the West for some time (ES 18 Oct 44). In NW Germany, a day-fighter unit "Detachment Nowotny," has recently operated against Allied strategic daylight

---

\* Lechfeld (5 m. SW of Augsburg) is the base of Test Unit 262, which is responsible for the experimental test and development of the ME-262.



attacks (ES 18 Oct 44). Another fighter unit in S Germany is believed to be operating against Allied photographic reconnaissance aircraft. Recent reports on the strength, equipment and operations of each of these units are discussed below.

3. ME-262 bomber unit on the Western Front (I/KG 51):

a. Reinforcement of unit: The unit which has been carrying out medium-altitude daylight bomber attacks in the West is an operational detachment of the 1st Gruppe of KG 51 (ES 18 Oct 44). Recent messages indicate that the remainder of the Gruppe has moved into NW Germany (from Lechfeld to Rheine) to reinforce the "Ops Detachment" and bring it up to the strength of a full Gruppe.\*

One message (16 October) stated that "for the purpose of instructing the Kommandeur of the Gruppe in practical operations at the front", that officer was to be operationally subordinated to Major Schenk (commander of the "Ops Detachment") for "the first six operational days," after which the Kommandeur would "take over operations ((by the Gruppe))."

Orders for operations on 22 October (the day on which the Kommandeur of the Gruppe was to take over control of operations) referred to the unit for the first time as I/KG 51.

Crew strength returns also substantiate the transfer to NW Germany of the remainder of the Gruppe. On 13 October crew strength was 13 at the unit's operational base (Rheine). That figure had risen to a total of 33 crews by 22 October and to 48 by 31 October. Of the 33 crews on 22 October, 31 were "operational" (presumably fully trained on the ME-262) and 15 were "ready for operations." By 31 October, 21 out of 48 "operational" crews were ready for operations.\*\*

---

\* This reinforcement was foreshadowed in a 28 August message from the Kommodore of KG 51, in which he stated that the "key crews" of the "Ops Detachment" had been given emergency training, but that the remainder of the 1st Gruppe could not be fully trained for operations before 1 October (ES 3 Sept 44).

\*\* The Gruppe's returns for 22 October stated that the strength given was "less the 1st Staffel," which was still at Lechfeld. The crew strength presumably increased between 22 and 31 October because of the arrival at Rheine of the 1st Staffel.

b. Aircraft strength: A series of daily strength returns for the unit at Rheine are as follows:

<u>Date</u>	<u>Aircraft (ME-262)</u>	
	<u>Total</u>	<u>Serviceable</u>
13 October	11	4
16 October - Subtype A-1	4	4
- Subtype A-2*	6	4
18 October	10	7
19 October (a.m.)	10	3
19 October (p.m.) - Subtype A-1	4	4
- Subtype A-2	6	4
22 October (a.m.)	12	8
22 October (p.m.)	16	10
23 October	16	12
25 October	17	12
27 October - All Subtype A-2	17	15
28 October	17	16
30 October	25	18
31 October	26	20
7 November	26	16
9 November	26	24

\* Note: No operations were carried out between 26 and 28 October, which doubtless explains the increasingly high degree of serviceability during that period.

c. Aircraft serviceability: On 3 October the "Ops Detachment" stated that in the future it proposed to issue strength returns at 0500 hrs daily, for the reason that "a true picture" of the serviceability and strength of units operating by day can never be given in the afternoon, when the return "is too bad" both as to strength and serviceability, and "presents a false picture" by comparison with other returns.

\*The return of 16 October contained the first reference to the A-2 subtype. Although it is not known how the A-1 and A-2 subtypes differ from each other, both are single-seater aircraft. A crash report for an A-2 reported missing from operations on 12 October listed only a pilot as missing. A similar 14 October report also listed a pilot as the only casualty.



There are strong indications that the ME-262 does not stand up well under sustained operations, and that this is particularly true of its power units.\* On 3 October, when only 3 aircraft out of 10 were serviceable, the "Ops Detachment" reported that its low serviceability was a result of "change of power units and ((airframe or power unit)) inspections." On 30 September two aircraft were unserviceable because "12 $\frac{1}{2}$ -hour tests" (presumably on completion of overhaul after 12 $\frac{1}{2}$  hours of operations) were being carried out. One aircraft was unserviceable on 8 October because of "25-hour tests," while on the same day a second aircraft was "in the workshops."

On 5 October "a dive while landing with only one power-unit" resulted in the loss of one ME-262. A second aircraft was almost completely destroyed when the pilot, coming in to land with "the port power unit stopped," suffered "a failure of controls." On 5 October one ME-262 crashed because "rupture of the fuel induction pipe" of the port power-unit resulted in the main tube-spar of the wing being burned through.

Reports suggest other weaknesses in the ME-262. On 14 October one aircraft was damaged on landing at Rheine because the nose-wheel of the undercarriage "failed to lower." On 5 October "an armament explosion," presumably the result of a failure in the nose-mounted 30-mm. cannon, damaged "the tip of the nose."

Two recent messages indicate that one earlier weakness in the ME-262 has now been corrected. The "Research Institute" at Oberammergau (47 m. SSW of Munich) stated that "for several months" it had not received "any more protests" concerning the "front part ((leading edge)) of ME-262 wings" and that the "reinforced forward wings in the ME-262 have proved their worth."

---

\*According to a ME-262 test pilot, quoted by a P/W, difficulty is experienced in accelerating to full power. This is not achieved immediately, but takes "a minute or two" and if an effort is made to speed up the process the turbines sometimes burn out.

d. Personnel:

(i) Total strength: The total ration strength of the "Ops Detachment" on 30 September was 234 men and 2 officials (including 17 flying personnel, 154 technical personnel, and 4 aircraft mechanics of the Messerschmitt firm).

(ii) Experience of flying personnel: An 11 October message on "holders of the German Cross in Gold and higher distinctions" listed 3 pilots whose "number of flights against the enemy" were respectively 400, 325 and 278, and one "wireless operator (aircrew)" with 247 "flights against the enemy."\*

Note: In preparing a T/O of personnel, KG 51 was instructed to consider "in a special supplement" the possible introduction of a two-seater version of the ME-262 (ES 18 Oct 44). The unit may be holding the "wireless operator (aircrew)" referred to in the above return for future operations by a two-seater type.

e. Operations:

(i) Points of special interest: On 23 October GAF Command West stated that, on orders of Luftflotte Reich, I/KG 51 was to submit to GAF Command West short reports on points of special interest arising from the Gruppe's operations, in addition to the usual operational reports. The following items were "to be looked on as points of special interest":

- (a) New maximum distances flown.
- (b) Fighter defense (to include area, ((own)) flying altitude and speed; type, speed and altitude of enemy aircraft).

---

\* The German cross in Gold is awarded to pilots who have shot down 20 Allied aircraft or who have made a corresponding contribution. It fills the gap between the Iron Cross Class I (awarded for 20-30 day, or 12 night, war flights) and the Ritterkreuz (awarded for 40-50 aircraft shot down or an equivalent achievement). The officer with 325 combat flights was Major Schenk, CO of the "Ops Detachment."



- (c) Successful attacks by enemy fighters.
- (d) Technical difficulties (such as power-unit failure) in carrying out operations.
- (e) When task was broken off, with reason (weather, defenses, etc.).

(ii) Navigation and control procedure: The radio equipment of the ME-262's used by the Gruppe includes (a) a radio-telephone set, equipped for use with the "Benito" system, (b) an "IFF" ("Identification Friend or Foe") set, and (c) a direction-finding homing apparatus. Navigation to the target is on a set course from base and the flight can apparently be accomplished without any instruction from the ground-control station as to change of course or current position. It is not yet clear whether the ground-control relies on a "Benito" transmission from the aircraft as a means of plotting its position, nor is there any evidence so far that the ground-control station instructs the aircraft when to release its bombs. It is even possible that on many occasions speech communication between aircraft and ground-control station does not start until after the bombs have been dropped.

On 22 October one aircraft requested the ground-control station to furnish it with a course back to base because its "homing apparatus" was unserviceable. The Air Ministry has commented that this message suggests the use of "Tornado" equipment (a method of direction-finding from voice-transmissions) for homing and landing.

The "Tornado" and "Benito" systems operate on different frequencies, each of which are pre-determined on the radio-telephone set carried in the aircraft. The radio set normally can operate on any one of 4 pre-determined frequencies, selected by a switch.

---

\*The "Ops Detachment," despite its protests, was recently informed that it would have to continue to use the "Benito" (range estimation) control for bombing (ES 18 Oct 44).

(iii) Bombing altitude: On 18 October the "Ops Detachment" reported that variable weather prevented attacks from being carried out "because of the dropping height ordered" Two days later instructions were given that, "by order of Göring." the previous bombing height of 13,000 feet could be reduced when attacking particularly important targets. For large area targets the bombing height was to be determined after taking into consideration the light Flak defenses.

(iv) Failure of bomb-container: One pilot reported on 7 October that when he dropped his bomb-load, one container of fifty 2.2 lb fragmentation bombs exploded about 325 feet below the aircraft. The detachment thereafter "stopped the issue" of that particular type of container.

(v) Operations in support of XLVII Pz Corps attack (27-31 October): During the period 27-31 October the 9th Pz Div, under the command of the XLVII Pz Corps, carried out an attack W of Venlo "to tie down Allied forces and relieve the Fifteenth Army" (ES 31 Oct 44). I/KG 51 supported the German ground forces by attacks on Allied concentrations in the area. Throughout the period the Gruppe was given orders by GAF Command West to attack Allied units in the area E of Eindhoven; alternative targets were to be attacked only if weather prevented attack on main targets. While evidence of the unit's operations during the period is incomplete, there are indications that it put up a greatly increased scale of effort. On 29 October, when the main target was the canal bridge at Helmond, intercepted radio traffic identified a total of 31 ME-262's on operations.\* The 31 aircraft operated in formations of up to 7 aircraft. The serviceable strength of I/KG 51 on 29 October is not known, but on the previous day

---

\* Since "Y" service intercepts generally fail to identify every aircraft on operations, it is probable that more than 31 ME-262's actually operated on 29 October.



the unit had only 17 aircraft, of which 16 were serviceable (see above).

(vi) Attacks on airfields: Apart from the special effort during the period 27-31 October, I/KG 51 has concentrated its attacks on Allied airfields in Holland. On 21 October the unit reported that reconnaissance of Grave airfield showed it to be "heavily occupied and very active." Orders for the following day called for that airfield to be attacked "continuously with all forces." Bad weather, however, cancelled those operations. During the period 1-7 November, I/KG 51 was ordered each day to attack "continuously and according to weather conditions" airfields in the Volkel - Eindhoven - Grave area occupied by Allied units, with alternative targets in the towns of Eindhoven and Nijmegen. "Glider concentrations" NE of Grave were also detailed as potential targets. In spite of those orders, however, actual operations during early November were on a very limited scale, chiefly because of weather conditions.

(vii) Operational subordination: On 5 November I/KG 51 was informed that it was to be directly subordinated "in every respect" to GAF Command West. The following day orders included the Gruppe in the signal network of that Command.

f. Transfer of unit: On 8 November Rheine, the Gruppe's base in NW Germany, was attacked by Allied aircraft, causing minor personnel casualties but no destruction of "airfield installations." Four days later the Gruppe's HQ and 2 of its 3 Staffeln had moved to Hopsten (7m. NE of Rheine), with only one Staffel remaining at Rheine. On 14 November the Gruppe informed GAF Command West that assembly of material for the "planned development" of Hopsten was "urgently required." Special difficulties were being experienced in "winter preparations" because of a complete lack of equipment.

3. Transfer to NW Germany of II/KG 51:

On 14 August the 2nd Gruppe of KG 51 was ordered to

move at once by rail to Schwäbisch-Hall (35m. NE of Stuttgart) to re-equip with the ME-262 (ES 28 Aug 44). Indications that the unit was continuing to train on the ME-262 in mid-October were noted in ES 18 October 44.

On 7 November an "ME-262 expert" of I/KG 51, discussing development of airfields for the 2nd Gruppe of KG 51, stated that Vechta (30m. SW of Bremen) and Hopsten were ready for immediate occupation but that Plantlunne (15 m. NW of Rheine) and "other prepared airfields" N of Rheine were to be "the final solution." The Geschwader HQ of KG 51 considered that, if possible, the occupation of Hopsten "should not be increased" but that Vechta should be developed at once so that it would be ready for occupation by the 2nd Gruppe by the beginning of December. The message also stated that the 1st Staffel of the 2nd Gruppe would be ready to transfer by the middle of November, and invited suggestions about the development of additional airfields for the Gruppe, including Hesepe and Vorden (48 m. SW and 50 m. SSW of Bremen respectively). One officer each from the 1st and 2nd Gruppen of KG 51 was to be sent to Vechta to "supervise development."

4. Day-fighter unit in NW Germany - "Detachment Nowotny":

a. III/JG 6 renamed "Detachment Nowotny": The 3rd Gruppe of JG 6, equipped with ME-262's, was first identified in early October at Achmer (10 m. NNW of Osnabrück), and transfers of ME-262's suggested that the unit was based at both Achmer and Hesepe, 3 m. NE of Achmer (ES 18 Oct 44).

In mid-October a message concerning the transfer of a fighter pilot was addressed to a Major Nowotny at Achmer. On 1 November Achmer reported that III/JG 6 had been renamed "Detachment Nowotny" and that the Detachment had a personnel strength of 12 officers, 2 officials and 315 men.

Note: (i) Major Nowotny, one of the highest scoring fighter pilots in the GAF, operated for a long time on the Eastern Front as a pilot in JG 54. In October



1943, after his 218th victory, he became the eighth member of the German Armed Forces to be awarded the "Oak Leaves with Swords and Diamonds to the Ritterkreuz."

(ii) The German communique for 9 November stated that "Major Nowotny, air group commander credited with 258 victories," had been "killed in aerial combat."

b. Bases: On 18 October "Detachment Nowotny" submitted the following strength return to the Air Officer for Fighters (which indicates that the unit was still training at that time):

Base	Aircraft		Pilots *			
	Total	Serviceable	Total	Operational	Available	Non-Operational
Achmer	5	3	13	1	9	3
Hesepe	5	4	9	5	5	4

Note: Of the 3 unserviceable aircraft, one was damaged as a result of "an emergency landing," a second was "on workshop flight" (presumably test flight after overhaul or repair), and the third was undergoing "power unit change" -- a status frequently reported in the case of the ME-262's of I/KG 51 (see above). On 31 October "Detachment Nowotny" reported a strength of 15 ME-262's and 96 motor vehicles at Achmer.

Recent messages indicate that Achmer is to be the principal base for the unit. On 31 October Achmer reported the following works projects for "Detachment Nowotny" which had been scheduled to be completed by 30 October:

Dispersal road to Seeste with connection to Halen (5 m. S of Achmer).

Battle HQ at Hotel Theole in Pente (2 1/2 m. SE of

\* Interpretation of figures in last three columns is tentative.

Achmer).

Billet huts in Seeste and Pente.

Huts and 46 parking bays at Achmer.

Roads and bays for dispersal at Halen.

Dismantling old and developing new workshops.

Installation for "T-Stoff" (concentrated hydrogen-peroxide, probably for rocket-assisted take-off).

A 2 November message from Achmer identified two fighter-control posts for the Detachment at Alfhausen and Merzen (8 m. N and NW of Achmer, respectively).

c. Possible provision of a motorized equipment station: I/KG 51 has had a motorized equipment issuing station since its early days in France. On 25 October Luftflotte Reich requested Luftgau VI, whose area includes Achmer, to check immediately whether a GAF motorized equipment issuing station, which had been "unemployed for about 4 weeks," could be "given up." If so, "re-equipping for ME-262" was to be carried out by 29 October. It is possible that the equipment station is intended for "Detachment Nowotny," following the practice adopted with I/KG 51.

d. Operations:

(1) Against 8th AAF strategic attacks: An 8th AAF summary of the GAF reaction to 1 November attacks on targets in NW Germany\* included the following:

\*From sightings and signal traffic, it is estimated that 4 to 6 ME-262's and 2 ME-163's were operating in the Zuider Zee - Münster - Gütersloh area at the time of withdrawal of the 8th Air Force heavy bombers. The ME-262's were believed airborne by 1354 hrs and proceeded west, making sneak attacks from 36,000 ft on escort fighters as they were withdrawing from the Ruhr and the general area Rheine-Zuider Zee. One P-51 was shot down and one, and

---

\* Received through "Ultra" channels and based partly on information from "Ultra" sources.



possibly two, ME-262's destroyed. Weather was generally 10/10 low clouds.

Preliminary analysis of traffic taken by airborne "Y" and forward intercept stations indicates that:

(i) The ME-262's reacted specifically to the 8th Air Force.

(ii) They were different aircraft from those of I/KG 51, which so far have engaged only in ground attack work.

(iii) The same jet-propelled aircraft have reacted unaggressively to strategic attacks since early October.

(iv) They have been associated with Achmer. Only III/JG 6 ("Detachment Nowotny") and I/KG 51 are known to be in the Achmer area. Since the latter has been concentrating on bomber operations, it would appear that III/JG 6 is the unit which has been opposing the 8th Air Force.

Because of the unaggressiveness, small numbers and preoccupation with the fighter escort of the ME-262's which have been attacking formations of the 8th Air Force, it has been thought that they were mainly training for high altitude interception. However, in view of the length of time during which the same tactics have been followed, two possibilities arise:

(i) The cautious tactics have been dictated by an actual lack of sufficient aircraft to make aggressive assaults on 8th Air Force formations.

(ii) The ME-262 is being conserved until a sufficiently large number is accumulated for a decisive blow against one of the Allied forma-

tions.

It required more than 2 months to build up the strength of I/KG 51 from 10 - 12 to 26 aircraft; on the other hand, the crew position of that unit is good. It is possible, therefore, that III/JG 6 is also better off for crews than aircraft, and that training under combat conditions has been going on with new crews while its aircraft strength, like that of I/KG 51, remained relatively static.

(2) Indications of nature of future operations:

On 2 November "Detachment Nowotny" informed the Air Officer for Bombers that it intended to install "Robot II" in its ME-262's "by way of experiment". The Detachment requested authorization for the experiment and allocation of the required equipment.

Note: This is the first reference to "Robot II".

Since the message was addressed to the Air Officer for Bombers the equipment apparently is to be used for some type of bombing. It may be a cover name for the "triaxial automatic pilot" which, according to the Japanese Naval Attaché in Berlin, is used for bombing in the AR-234 (see below).

The Detachment also may be intending to operate by night, since the 31 October report from Achmer on works projects (summarized above) indicated that certain of those projects were for "night fighting."

5. ME-262 fighter unit in S Germany:

A number of ME-262's of Test-Unit 262 at Lechfeld are believed to be operating as defensive fighters in S Germany, particularly against Allied photographic reconnaissance aircraft. Two strength returns made by this unit to the Air Officer for Fighters and the GAF Experimental Station at Rechlin (60 m. NNW of Berlin) are as follows:



<u>Date</u>	<u>Aircraft</u>		<u>Pilots</u>	
	<u>Total</u>	<u>Serviceable</u>	<u>Total</u>	<u>Ready</u>
23 September	12	2	17	15
4 October	30	14	19	?

The addresses to which the returns were sent suggest that the unit is probably (i) still training, and (ii) carrying out experimental work on the ME-262.

6. Establishment of a ME-262 Reserve Training Unit:

Recent messages show that the 9th Staffel of JG 2 has been withdrawn from operations in the West to form a Reserve Training Unit at Lechfeld, and that at least a part of Test Unit 262 has moved from Lechfeld to Unterschlauesbach (15 m. WSW of Nurnberg) to make accommodations available for it. The Reserve Training Unit sent the following strength returns to the department of the Air Officer for Fighters known to be connected with ME-262 training:

	<u>2 November</u>	<u>11 November</u>
<u>Aircraft</u>		
(i) At parent unit:		
Total	16	18
Serviceable	6	9
(ii) At transit depot*:		
Total	25	22
Serviceable	5	9
<u>Crews</u>		
(i) Parent unit:		
Total	11	11
Ready	6	6
(ii) Pupils:		
Total	19	49
Ready	4	4

It appears from the above returns that between 2 and 11 November, the Reserve Training Unit received 30 student pilots.

The development of the ME-262 by Test Unit 262 is

---

\* Presumably at the ME-262 transit depot at Leipheim (see below) awaiting delivery to the Reserve Training Unit.

apparently to be carried out at Unterschlaüersbach while the Reserve Training Unit carries out pilot training at Lechfeld. A 1 November message from Luftgau VII (S Germany) stated that Unterschlaüersbach was to be occupied "in the next few days" by "Test Station((ME-)) 262," the advance detachment of which had already arrived there. "Test Station 262" is apparently being established on a long-range basis, since the message stated that "permanent development has not yet been provided" at the four dispersal areas 3-5 miles from the airfield.

7. Accumulation of ME-262's on airfields in S Germany:

In a 25 October message, Luftgau VII (S Germany) notified its subordinate Airfield Regional Commands that the OKL Operations Staff had "drawn attention" to the "particularly big" accumulation of ME-262's on training and operational airfields, and to the danger that Allied attacks might cause "considerable losses." The Airfield Regional Commands were ordered to disperse the aircraft, using "all available means." The message particularly stressed the necessity for dispersal at Lechfeld.

8. ME-262-transit depot in S Germany:

A transit depot for ME-262's has apparently been established at Leipheim (20 m. NE of Lechfeld) since a 10 November message requested that equipment for a "ME-262 transit depot" be delivered to that airfield.

Note: Small numbers of ME-262's have been seen at Leipheim at intervals during recent months.

On 16 July a Staffel of SKG 10 (FW-190 fighter-bomber unit) was ordered to Leipheim to re-equip with the ME-262 (ES 21 July 44).

9. Training of aircraft mechanics:

A Luftgau VI message of 4 October instructed the Airfield Regional Command at Stuttgart/Böblingen to designate



3 aircraft mechanics and 3 power-unit mechanics from each workshop detachment of the Airfield Regional Command for an "instruction course on the ME-262."

10. Airfield development:

a. NW Germany: On 7 October Luftgau XI (NW Germany) informed "Ops Detachment KG 51" that "in accordance with an order from Luftflotte Reich" it was "urgently necessary" that an officer be sent to Luftgau XI for a preliminary conference about "surveying airfields."

Note: On 28 August the "Ops Detachment" proposed an immediate start on the improvised development of suitable stretches of the "Reichs Autobahn" system as landing strips (ES 5 Oct 44).

b. "Construction Program": On 1 October, Luftgau VII stated that, to "amplify the minimum construction program" the GAF Stations at Lechfeld and Neuberg (45 m. NNW of Munich), were to place 5 and 3 trucks respectively at the daily disposal of the "works control" of the Todt Organization. The order stated: "It is imperative that the trucks be provided. The numbers regularly detailed are minimum figures and, in case of need, all possible support over and above those figures is to be given."

PART II

AR-234

1. Report by Japanese Naval Attaché in Berlin:

On 31 October the following detailed report on the AR-234 was sent to Tokyo by the Japanese Naval Attaché in Berlin:

"a. Description: Arado initiated production of this aircraft about 2 years ago. The original design was conceived with high-speed as the keynote and the aircraft was originally built as an unarmored under carriage-gun type reconnaissance aircraft. Those now in mass production, however, are bomber types, but with a speed commensurate with reconnaissance. The aircraft is a high-wing single-seater monoplane with two power-units and tricycle retractable undercarriage. Its high speed enables it to draw away from enemy fighters. It has obtained excellent results in difficult reconnaissance of regions of England defended by anti-aircraft guns ((reported by the Naval Attaché on 27 September - ES 18 Oct 44)).

"b. Dimensions:

Span	47½ feet (approximately)
Length	41 feet 7¼ inches
Height	14 feet 1 inch
Wing surface	294 square feet

"c. Performance:

(1)	<u>Maximum speed (mph)</u>	<u>Altitude (feet)</u>
	425	Sea level
	470	5,100
	425	33,300
	410	36,670



The maximum speed which has been attained in test horizontal-flight is 750 mph.

\*(ii) Reduction of maximum speed by bomb-load:

<u>Bomb-load (lbs)</u>	<u>Reduction in speed (mph)</u>
1,100	15-20
1,540	45-50
2,200	60-70
3,300	75-90

Note: P/W reports have stated that the AR-234 can carry a maximum bomb-load of 4,400 lbs (ES 18 Oct 44).

\*(iii)

<u>Cruising range (miles)</u>	<u>Altitude (feet)</u>
400	Sea level
750	20,000
1,000	33,300

The noteworthy point of the Arado's power system is that the cruising range is extremely great, and that it increases with the altitude of operation.

\*(iv) Rate of climb and ceiling:

Service ceiling	35,100 feet
Absolute ceiling	38,100 feet
Rate of climb	
With no bomb-load	3,180 feet per min
With 1,100 lbs of bombs	2,220 feet per min*

Note: The Japanese Naval Attaché previously (27 September) had reported a successful reconnaissance of SE England by an AR-234 at an altitude of 42,800 feet (ES 18 Oct 44). The above figures may refer to service and absolute ceilings of the AR-234 when carrying a bomb-load.

	<u>"(v) Take-off distance:</u>	
	<u>On a runway</u>	<u>On a grass surface</u>
With 'supercharger'*	1,430 yards	1,650 yards
Without 'super-charger'*	1,628 yards	1,960 yards

With rocket-assistance the take-off distances are decreased. Thus, with rocket-assisted take-off, the distance on a runway with 'supercharger' is reduced to 770 yards. The above figures are for a ground temperature of 15° Centigrade. The thrust of the power-unit increases with decreasing temperature. At a temperature of 30° Centigrade, rocket-assisted take-off is necessary to offset the weight of the engine.

"(vi) Landing speed: At a landing weight of 12,430 lbs, the landing speed is 94 mph.

"d. Reconnaissance version: In addition to a camera, the reconnaissance version carries in the rear of the fuselage a FuGe 46Z ((standard voice transmitter-receiver)) and a FuGe 25 (( "Identification Friend or Foe" equipment)). The antennae for these are respectively in the wooden leading-edge of the tail plane and the undersurface of the fuselage.

"Underneath the fuselage is a blister containing two 20 mm. cannon, for which there is a periscope gunsight. This gunsight can be extended above the windshield and used alternatively as a high-altitude bombsight.

"e. Bomber version: The bomber type differs from the reconnaissance version in that it carries fixed machine guns in place of the camera and a 1,100 lb bomb in the 'depression' (( bomb-bay or tunnel))

---

\*It is not known to what the term "supercharger" refers.



under the fuselage. By switching on the automatic pilot, a bomb-sight can be used for horizontal bombing. The aircraft is easily modified for bombing or reconnaissance, allowing interchangeability of functions.

"f. Power-units and fuel: Both Jumo-109004 and BMW-109003 units have been installed and tested. There is no difference in performance.

"The two main fuel-tanks are in the fuselage and have a total capacity of 942 gallons. Two jettisonable tanks with a capacity of 80 gallons ((each ?)) are carried under the wings, the fuel in which is used particularly for climbing.

"g. Miscellaneous equipment: A triaxial automatic pilot is fitted. In the future the cockpit will be pressurized and the leading-edge of the wing electrically heated to prevent 'freezing' ((ice-formation))."

2. Operations on the Western Front--"Detachment Goetz":

a. Identity of "Detachment Goetz": A small number of AR-234's have been operating for some-time on daylight reconnaissance of SE England and the Western Front. The aircraft belong to a detachment, variously referred to as "Detachment Goetz" and "Detachment Sperling" and previously believed to be a part of Reconnaissance Gruppe 123 (ES 18 Oct 44). A GAF Command West message of 19 October, however, was addressed to the "1st Staffel of Experimental Unit Ob. d. L. (Detachment Goetz)," indicating that the Detachment is a part of the Ob. d. L. unit.

Note: On 2 August the Experimental Ob. d. L. unit reported that it had carried out a "successful reconnaissance of the ((Normandy)) beachhead" (ES 18 Aug 44).

b. Importance of reconnaissance by the Detachment:

On 19 October the OKL stated that "in order to obtain a picture of the operational intentions and possibilities of the "enemy" reconnaissance of the rail and road networks, including bridges, and the state of repair works was of "especial importance." GAF Command West therefore ordered "Detachment Goetz" to "exploit every suitable weather" to carry out the task assigned by the OKL (ES 23 Oct 44). Six days later C-in-C West informed Army Groups "B" and "C" that strategic air reconnaissance in the West, "even though on a small scale," was being assured by the Detachment which "for the present is to receive reconnaissance aircraft coming from the factories."

c. Strength: A series of returns, tabulated below, indicate that the strength of the Detachment is increasing very slowly despite its importance for strategic reconnaissance:

<u>Date</u>	<u>Aircraft</u>		<u>Crews</u>	
	<u>Total</u>	<u>Serviceable</u>	<u>Total</u>	<u>Ready</u>
4 October	2	2	2	2
13 October	3	-	3	3
17 October	4	2	3	3
2 November	5	4	5	5

d. Reconnaissance orders and results: A GAF Command West message of 7 October stated that "Detachment Goetz" had obtained photographs of ports and airfields in E England two days before. Interpretations of those photographs revealed a greater concentration (of Allied shipping) in most places than (was present) on 11 September. This confirms the opinion that the (Allied units) were on operations at the time of the first reconnaissance.\*

---

\* The Japanese Naval Attaché in Berlin reported a photographic reconnaissance of SE England by an AR-234 at 42,800 ft, presumably the flight on 11 September referred to by GAF Command West (ES 18 Oct 44).



The same message stated that on 6 October an operation by the Detachment to cover "the remainder of the ports and airfields in SE England," had to be broken off "because of ((Allied)) fighters." A second operation was not possible because of unfavorable weather and the "lengthy preparations for take-off."

Note: The report made by the Detachment on its 6 October operations stated that the "target, SE England, was completely covered by cloud," but made no reference to Allied fighter opposition (ES 18 Oct 44).

Over the past month the Detachment has been ordered to pay special attention to the port of Antwerp. That port was covered on 13 October (ES 18 Oct 44) and again on 21 October when, in response to an order issued at 1100 hrs that "if weather permits operations, Antwerp is first priority," one aircraft operated between 1422-1556 hrs over Antwerp, Ostend, Zeebrugge and Walcheren. Cloud allowed only partial photographic coverage of Antwerp.

Between 0826-0955 hrs on 4 November, one AR-234 operated over S Holland and Belgium, including photographic reconnaissance of Antwerp. The following day the Detachment was ordered to obtain "another good aerial photograph" of Antwerp harbor as soon as weather permitted, if possible at low tide and with the Kruisschans sluice as the main point of interest (ES 7 Nov 44).

Other reconnaissance orders to the Detachment have included such targets as the ports along the Belgian coast, Flushing, Allied shipping traffic, and roads, railroads and bridges in Belgium and S Holland.

e. Airfields: For some time the Detachment has been operating from Rheine (25 m. NNW of Münster)

the airfield also used by the ME-262's of I/KG 51 (ES 18 Oct 44). The Detachment was still there on 8 November, when I/KG 51 took over the Detachment's signal station.

Two recent messages, however, have indicated that the Detachment may be transferring from Rheine. On 27 October the Detachment stated that its transport unit had been ordered immediately to surrender "both 5-ton trucks." Since neither Rheine nor KG 51 could make available any trucks "for the transfer ((details not specified))" an "immediate investigation" was requested. On 6 November Luftgau VI instructed Rheine to issue to the Detachment, from Luftgau stocks, 264 gallons of low-grade motor fuel and 198 gallons of diesel fuel. The small quantities of fuel suggest that any transfer would be for a short distance only.\*

3. Re-equipment of units with AR-234's:

Previous reference has been made to the possibility that a few units were being re-equipped with AR-234's (ES 15 Oct 44). Recent messages show that these units include 3 Gruppen of a long-range bomber Geschwader (KG 76).

The 1st and 2nd Gruppen of KG 76 were withdrawn from operations in early July and transferred to Alt-Lonnewitz (40 m. ENE of Leipzig) to which base the Geschwader HQ also supposedly had transferred shortly before. Since that time the Gruppen have not been identified. A P/W who was a radio mechanic at Alt-Lonnewitz until August 1944 stated that units of KG 76 were retraining there on the AR-234, and that some 150-200 civilian technicians of the Arado firm were directing the fitting-out of the hangars for final assembly of AR-234's. On 3 November Alt-Lonnewitz was informed that

---

\*One, or possibly two, aircraft of the Detachment were transferred to Biblis after the beginning of the Allied Third Army offensive to provide better reconnaissance cover (ES 14 Nov 44).



"oleo" undercarriage legs for 2 AR-234's were ready for collection at the Mansfeld works at Prenzlau (55 m. NNE of Berlin).

The 3rd Gruppe of KG 76 is re-equipping at Burg (15 m. NE of Magdeburg). On 10 October the signal platoon of a long-range bomber Gruppe was ordered to transfer to Burg, where it was to be subordinated to the 3rd Gruppe. On 24 October a signal officer was assigned to that Gruppe at Burg. The 3rd Gruppe had not been otherwise mentioned since May, when it was to transfer, without aircraft, from Italy to "another operational area."

A P/W who was on duty at Burg in early August stated that a unit "known as KG 76" arrived at that airfield on 2 August, bringing 2 or 3 jet-propelled aircraft; the P/W's description leaves little doubt that they were AR-234's. The GAF Technical School at Fassberg (45 m. NE of Hannover), believed to be training ground mechanics on jet-propulsion power-units, also has been in contact with the 3rd Gruppe at Burg.

On 25 October the GAF Experimental Station at Travemünde (on the Baltic coast 12 m. NNE of Lübeck) forwarded instructions to KG 76 on the "lacquering" of the AR-234. (Presumably "lacquering" refers to the production of a high-polish on the wing and fuselage surfaces, a practice frequently employed on high-speed aircraft.)

There are indications that KG 76 is ready to operate a number of AR-234's, apparently as bombers. A message of 7 November stated that the Air Officer for Bombers intended Münster/Handorf to be used as a base by "Storp."

Note: An Oberst Storp, formerly Kommandore of KG 6 and in charge of long-range bomber operations in Italy, was reported by a P/W in September

to be in charge of those elements of KG 76 re-training on the AR-234 at Alt-Lonnewitz.

KG 76 pointed out on 10 November that "because of technical limitations," the AR-234 could be loaded with bombs and dropping containers only to a maximum weight of 1,100 lbs.

Note: The maximum bomb-load of the AR-234 was stated by a P/W to be 4,400 lbs (ES 18 Oct 44). The Japanese Naval Attaché's report to Tokyo on 31 October (see above) referred to performance characteristics of the AR-234 with bomb-loads up to 3,300 lbs.



PART III

ME-163

1. New type ME-163 - ME-163 C:

(a) Description: A 6 September report by the Japanese Naval Attaché in Berlin gave information on the ME-163 C, "designed as an improved model of the ME-163 B."\* The report specifies the following differences and improvements in the new subtype as compared with the B-subtype:

(i) Maximum propulsive force (of the rocket power unit) at ground level increased  $33\frac{1}{3}$  per cent.

(ii) Wing span increased by about 1 foot.

(iii) Armament consists of six 30 mm. cannon, 4 mounted under the nose of the aircraft and 1 in each wing root.

(iv) Directional control at low speed improved by an "auxiliary rudder" placed in the rocket jet-stream. Difficulties have arisen in construction and development of suitable materials for that rudder (presumably because of the heat of the jet-stream).

(v) "It may be inferred from the strength standards" that it is hoped to install a pressure (cabin) for the pilot.

(vi) Plans have been made to increase duration of flight by the fitting of a "special combustion chamber" for cruising conditions.

The Japanese "Chief Naval Inspector" in Germany on 29 September reported as follows on the ME-163 C:

"The C-subtype has a cruising engine. The cruising combustion chamber has a maximum diameter

---

\* The ME-163 A is the "cold" trainer sub-type and the ME-163 B a "hot" operational sub-type. The "hot" and "cold" versions are reported to differ in the igniter used with the hydrogen peroxide fuel and in the temperature of combustion.

of about  $6\frac{1}{2}$  inches and is fitted at the tail end of the fuselage directly under the main combustion chamber. The fuel system differs in that simple attachments have been added to the existing pressure and fuel regulation valves. The propulsive force ((of the cruising chamber)) can be regulated between a minimum of about 110 lbs and a maximum of about 880 lbs.

"The main engine has a margin of power, and merely by increasing the fuel supply without any alteration in the structure, the maximum propulsive force can be raised from 3,300 to 4,400 lbs. If necessary, both main and cruising power units can be used at once to produce the maximum combined propulsive force."

Note: A P/W, who claims to have inspected a "new type ME-163" at Lechfeld, stated that the armament is five 30 mm. cannon, that the flight endurance is 28 minutes at full rocket power (as compared with a reported endurance of 8 minutes at full power for the ME-163 B) and that the cockpit is pressurized.

(b) Production by the Junkers Company: The "Chief Naval Inspector" in his 29 September report, indicated that production of the ME-163 C may have been transferred to the Junkers firm. His report included the following:

"The designs of the ME-163 C, the improved model of the ME-163 B, have been transferred by the Messerschmitt Company to the Junkers Company and the name of the aircraft has been changed to JU-298 ((questionable)).\* The aircraft is being produced experimentally by Junkers."

Ten days later the Japanese Naval Attaché in Berlin reported to Tokyo that "according to reliable

---

\* In May 1944 a P/W stated that the "JU-588" was a Messerschmitt "rocket fighter"



reports," the Junkers Company, pursuant to an order from the German Air Ministry, was transferring to other companies the production of aircraft, "chiefly the mass production of ME-163's".

2. Operational Unit (JG 400):

A 31 August directive from the GAF Chief Commandant of Technical Schools referred to the training of 20 aircraft engine fitters at the Walterwerke at Kiel (which manufactures power units for the ME-163 - MNS 22 Apr 44), and stated that the men were required "for the setting-up of the 3rd Staffel of JG 400 (ME-163)" (ES 10 Sept 44). A Jagdkorps I message of 27 October requested signal personnel for the "newly set-up" 3rd Staffel and indicated that the Staffel was based away from the other Staffeln of JG 400.

A fourth Staffel of JG 400 also has been referred to in a recent message; on 15 October Luftflotte Reich issued directions for the procurement of two "fast transport trucks" for that Staffel. During the past summer the GAF has built all its single-engined fighter Gruppen up to a strength of 4 Staffeln. It is not known whether the same practice has been followed in the special case of JG 400; the 4th Staffel may be (i) the last one in the 1st Gruppe of JG 400, or (ii) the first Staffel in a second Gruppe of JG 400.

In any case the 1st Gruppe is apparently now fully constituted, as in a message of 1 November, Jagdkorps I announced the appointment of a Major Spaete as acting Kommandeur of that Gruppe.

3. Training of pilots for the ME-163:

The experimental test and development of the ME-163 has been carried out at Zwischenahn, 30m. WNW of Bremen, by Test Unit 16 (MNS 22 Apr 44). Information

about the training of pilots for the ME-163 is, however, somewhat limited. It appears that student pilots attend a standard single-engined fighter pilot training course followed by special glider training. They then pass on to a Reserve Training Unit. On 10 November JG 102, a single-engined fighter Reserve Training Geschwader based at Flensburg, 35 m. NW of Kiel (ES 4 Nov 44), stated that "at present" no pupils were being trained for the ME-163. The message further stated that the "October course" of 38 pilots had been passed on to the Glider School at Frederikshavn (on the NE coast of Denmark, 35 m. NE of Aalborg).

Note: (i) The transfer of pilots fully trained on single-engined fighters to a Glider School is explained by reports that the limited endurance of the ME-163 is increased by gliding with power cut off after the aircraft has attained operational altitude.

(ii) Recent messages have indicated that JG 102 has a number of ME-109 G-14's, a high altitude sub-type which may be used to give the ME-163 student pilots experience in high altitude flying.

The Reserve Training Unit of JG 400 was first mentioned in a 26 September message about "IFF" ("Identification Friend or Foe" equipment), which stated that 5 sets were to be dispatched to that unit. The message did not indicate the strength or location of the unit. A Jagdkorps I message of 28 October, however, referred to the detachment of an officer from an air crew pool for employment as a pilot in the "Reserve Training Staffel" of JG 400.



PART IV

Heinkel Jet-propelled Aircraft.

On 11 and 12 October the Japanese Naval Attaché in Berlin visited Dr. Heinkel. In a report to Tokyo on 19 October on "matters of importance imparted to me at that time," he included the following information on the Heinkel "rocket plane":

"The Hirth Company", in cooperation with the Heinkel Company, has been experimenting for 6 years on the Heinkel rocket aircraft. They are already producing gas-turbine type dynamo equipment in large quantities and are expected to reach the actual test stage about December of this year. The most recent turbine equipment of Junkers and BMW ((presumably the Jumo-109004 and BMW-109003 jet-units respectively)) attains a thrust of about 1,870 lbs, but the Heinkel one reaches as much as 2,640 lbs and shows excellent capacity. The maximum speed of the new Heinkel rocket aircraft is expected to approach 550 mph.

"From the production standpoint it is easy to make, allows a saving of materials, and if everything progresses favorably, as many as 1,000 of these aircraft should be produced by next Spring. Hitler has recently given approval to the manufacture of this type of aircraft by other large companies in addition to the Heinkel Company.

"Duration of flight is about 30 minutes near ground level and from 60 to 70 minutes at an altitude of 23,000 - 27,000 ft.

"At the present time the GAF is keeping completely

---

"The Hirth Company, producers of low-power aircraft engines, is reported to be mainly engaged at its Zuffenhausen (Stuttgart) works on experimental work on behalf of its holding company, the Heinkel aircraft concern.

quiet about this aircraft and therefore Dr. Heinkel is also cautious.

"The Hirth Company's new turbine factories are located, for the most part, in southern Germany and include a considerable number of underground installations."