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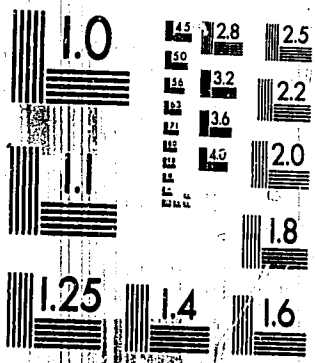

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U. S. NAVAL TECHNICAL MISSION IN EUROPE
c/o Fleet Post Office
New York, N.Y.

File: A12-1(85/He)

Serial: 00338

1 November 1945

From: Chief, U.S. Naval Technical Mission in Europe.
To : Director of Naval History.

Via : Chief of Naval Operations.

Subject: Historical Data on U.S. Naval Technical Mission in Europe, First Narrative.

Reference: (a) CominCh Serial 772 of 14 February 1945.
(b) Director of Naval History C1-162 of 19 February 1945.

Enclosure: (A)(HV) First Historical Narrative of U.S. Naval Technical Mission in Europe.

1. Enclosure (A) is forwarded herewith.

L. V. HOMMINGER
Captain, U.S.N.
Acting

cc: (w/o enclosures)

ComNavEu (Historical Officer)
Op-16-P-4
BuOrd
BuShips
BuAer
BuDocks
BuSandA
BuPers
BuMed
ORI
ONI
ComNavForGer

S E C R E T

HISTORICAL DATA ON
U.S. NAVAL TECHNICAL MISSION IN EUROPE
FIRST NARRATIVE

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DIRECTIVE

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UNITED STATES FLEET

Serial: 003686

SECRET

Headquarters of the Commander in Chief

NAVY DEPARTMENT
Washington 25, D.C.

26 December 1944.

From: Commander in Chief, United States Fleet and Chief of Naval Operations.

To: DISTRIBUTION LIST ATTACHED.

Subject: U.S. Naval Technical Mission in Europe.

1. On 4 December 1944 the Secretary of the Navy approved the establishing of a U.S. Naval Technical Mission in Europe, (short title, NavTecMisEu), with the following mission and tasks:

Mission — To exploit German science and technology for the benefit of the Navy Department technical Bureaus and the Coordinator of Research and Development.

Tasks

(a) To coordinate all the United States Naval activities engaged on the continent of Europe in exploiting German scientific and technological intelligence.

(b) To form a pool of technically qualified personnel under Naval control to operate as field teams either independently or with Combined Intellligence Objectives Sub-Committee (C.I.O.S.) teams, Technical Industrial Intelligence Committee (T.I.I.C.) teams, ALSOS teams, United States Army teams, or British teams where such teams are exploiting targets of the United States Naval interest. The Naval ALSOS group already established will be the nucleus of this pool.

2. The Mission will be composed of Chief of Mission designated by the Commander in Chief, United States Fleet and Chief of Naval operations, technical officers and civilian technicians who will be provided by the technical Bureaus and by the Coordinator of Research and Development, together with the necessary administrative personnel. The present relationship of the Navy with the Army ALSOS Mission will remain unchanged and the present close cooperation should continue. The chief of the Navy Technical Mission will be the Navy representative on the ALSOS Mission and will assign officers or civilian technicians to ALSOS projects as necessary. ALSOS facilities will be used to the maximum extent that the Army can provide them.

3. Mission activities should be in general accordance with ComNavEu Intelligence Memorandum No. 4, dated 1 November 1944. (1)

4. It will be necessary that the Chief of Mission be kept continually informed as to the plans and activities of the Technical Intelligence Committee and War Department technical missions. For this purpose an office in the Division of Naval Intelligence will be established which will keep in close touch with such groups. (2)

- -

(1) See Appendix 4 and Appendix 10.
(2) See Appendix 6.

SECRET

5. Existing Naval activities in Europe will furnish the Mission necessary assistance in the form of transportation, billiting, office space, provision of junior administrative personnel, clerical assistance, etc.

6. The Chief of Mission is to be regarded as the direct representative of the Commander in Chief, United States Fleet and the Chief of Naval Operations for procurement of German technical intelligence in continental Europe and should be given the maximum freedom of action consistent with operational Naval and Military requirements. As a U. S. Naval organization in Europe, the Naval Technical Mission will be subject to the Military control and orders of the Commander, U. S. Naval Forces, Europe. The Chief of Mission as commanding officer will report to the Commander, U. S. Naval Forces, Europe in person and keep him informed of his movements and of the roster and movements of his staff. The Chief of Mission will be further directed to report to the Senior U. S. Naval authority in the areas to be exploited. Subordinate members of the Mission will report only to the Chief of Mission. Each Mission member will retain his normal permanent duty status and will be ordered to report for temporary additional duty to the Chief of Mission for the necessary length of time to complete the exploitation of his specialty.

7. Subject to the foregoing, the Chief of Mission is authorized and directed:

(a) To travel and to order any other members to travel anywhere in Europe.

(b) To obtain and expend such funds as may be necessary in procuring technical intelligence.

(c) To obtain necessary assistance from United States Naval authorities in Europe.

(d) To obtain necessary assistance from United States Army authorities in Europe utilizing the ALSOS Mission channels wherever possible

(e) To forward intelligence reports direct to the Division of Naval Intelligence with copies to the appropriate offices in the Navy Department and to appropriate United States Naval activities in Europe and to communicate directly with the Navy Department regarding the intelligence operations of the Mission.

(f) To ships any material of special interest to the Navy Department direct to the United States subject to current policies.

(g) To return to the United States for consultation at such times as may be considered necessary.

E. J. KING

/s/ HOWARD E. OREM
HOWARD E. OREM
Flag Secretary

DISTRIBUTION LIST FOR COMINCH SERIAL 003686

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/s/ HOWARD E. OREM
HOWARD E. OREM
Flag Secretary

N A R R A T I V E

INTRODUCTORY

The U. S. Naval Technical Mission in Europe (NavTecMisEu) was established on 26 December 1944 and activated on 20 January 1945. It was decommissioned , its mission completed, on 1 November 1945.

The mission of NavTecMisEu, as formally stated in the document under which NavTecMisEu was established, was:

> "To exploit German science and technology for the benefit of the Navy Department technical Bureaus and the Coordinator of Research and Development."

In other words, NavTecMisEu was an instrument of the technical branches of the Navy Department. It was designed and built to search out and remove to the Navy Department - and as rapidly as possible - all available German scientific and technical information.

To implement this task, a total of 309 officers, 109 civilian technicians and 340 enlisted men were on duty with the Mission at one time or another. These figures, plus more than a hundred French and German civilians employed for various tasks, brought the total personnel strength of the Mission to almost 900. The largest number of Mission personnel on board at any one time was 579. This was on 31 July 1945.

In transmitting information to Washington, the highest priority was given to that which was applicable to the war against Japan. Information which required rapid transmission was forwarded either by dispatch or by Letter Report. However, the bulk of information collected by the Mission was reduced to detailed Technical Reports.

In the course of nine and one-half months of its lifetime, the Mission compiled some 240 Letter Reports and 550 Technical Reports. The account of how this mass of information was assembled is related in the following chapters.

S E C R E T

ORIGIN

The U. S. Naval Technical Mission in Europe was activated 20 January 1945, but the story of its creation begins with the summer of 1944.

That the U.S. Navy should exploit all the technical ramifications of theGerman Navy was a foregone conclusion. The Navy Department sent Captain (later Commodore) Henry A. Schade, U.S.N., to Europe in June 1944 to investigate the means of best doing this.

Captain Schade came to Europe as the Naval Member of the U.S. Army organization ALSOS. The ALSOS Mission had been formed 11 May 1944 for the purpose of investigating German scientific developments.

On the basis of experience and knowledge gained while a member of ALSOS throughout the summer and fall of 1944, Captain Schade made recommendations to the Navy Department which resulted in the formation of NavTecMisEu.

Captain Schade spent June and July 1944 in Europe. On 19 June he reported to SHAEF in London for additional duty with the Combined Intelligence Priorities Committee (forerunner of the Combined Intelligence Objectives Sub-Committee, known as CIOS). This organization comprised seven U.S. and seven British agencies, of which the U.S. Navy was one, under the joint Chiefs of Staff. Its purpose was to compile priority lists of German installations and personalities for exploitation, covering the entire field of Germnn intelligence.

Captain Schade returned to Washington for a brief period in August 1944. He selected four officers to join him in the Naval Section of ALSOS, of which he was appointed Senior Naval Member on 13 August 1944.

ALSOS set up offices in the U.S. Navy Headquarters building, 9 Rue de Presbourg, Paris, in which building NavTecMisEu later was housed.

During the fall of 1944 several additional officers were added to the Naval Section of ALSOS. Field work began on a limited scale, covering German installations in France and Belgium. (1) Four jeeps and two weapons carriers were obtained from Coml2thFleet. Clerical work was done by two yeomen. An index of targets, more highly specialized than that of CIOS, was started.

Experience soon revealed that the Navy needed freer play in the exploitation of German intelligence than was possible under the restricted ALSOS directive. In a letter dated 30 June 1944, Captain Schade proposed to the Coordinator of Research and Development that Navy ALSOS

> "be responsible not only for the collection of 'scientific intelligence' under the original terms of the original ALSOS Mission, but also for the collection of 'technical intelligence' for the U.S. Navy on the continent." (2)

On 25 October 1944 a conference was held in London, attended by Admiral Stark, Vice-Admiral Glassford, Captain Shelley, Captain Schade, and others, at which the ALSOS Mission was discussed. Minutes of that meeting stated:

> "The advantage of an independent Mission for the collection of scientific and technical intelligence on German activities to supplement those intelligence activities which are covered in routine systematic fashion on a combined basis with the British under the CIOS system, were agreed to by all present." (3)

On 11 November 1944 Captain Schade was recalled to Washington to discuss further plans. He found Navy Department officials alert to the rich possibilities of German exploitation, and eager to create adequate machinery for this exploitation.

Captain Schade, upon request, submitted detailed views on the subject in a Memorandum dated 27 November 1944. (4) This Memorandum stated in part:

> "By technical intelligence is meant information on German material developments of direct interest to the technical Bureaus of the Navy Department including research, engineering, and processes involved in the German war effort...

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(1) See Appendix 27 for index of ALSOS Reports.
(2) See Appendix 1.
(3) See Appendix 3.
(4) See Appendix 5.

"....ALSOS.... is primarily an Army activity in which the Navy was invited to participate....

"The objectives of the Mission (ALSOS) as set forth in its Army directive, comprehend only 'secret scientific developments' of the enemy....

"....Naval participation in the Mission (ALSOS) is recognized in the directive only to the extent that any Naval Personnel accredited to the Mission shall be classified as Naval Scientists and function as assistants to the civilian Scientific Chief of the Mission...

"In actual operation of the Mission(ALSOS) to date in France, Belgium and Holland, there has been considerable deviation from the basic directive. The Senior Naval Member has utilized the Mission, where possible, without actual authority to do so, as a means of covering all Naval needs for technical intelligence on the continent of Europe, including not only research but also weapons and devices and industrial developments and processes of special interest to the Navy....To perform these functions there were, as of 10 november, a total of 17 Naval officers assigned to the Senior Naval Member....

"Since the scope of Naval activity far exceeded the original intentions of the War Department it was possible for the Army administration of the Mission to furnish only a fraction of the required services to the Naval activity.

....Reports of target exploitations by Naval activities have been forwarded by the Senior Naval Member directly to the Coordinator of Research and Development, Navy Department. Although the civilian Scientific Chief of the mission has maintained (quite properly under the Mission's Army directive) that all reports should be submitted for his scrutiny and approval and should be forwarded by him through War Department channels, this is obviously an unrealistic procedure in view of the existing circumstances and cannot satisfy Navy needs.

"To summarize, in order to get Navy business done, the Senior Naval Member has found it necessary to act without actual authority to do so as an independent Navy Mission utilizing whatever facilities, Army, Navy, ALSOS, civilian, could be obtained under the circumstances existing in the field. Although this has worked with reasonable satisfaction so far it is doubtful whether it can continue to work in view of growing naval needs for technical intelligence as the defeat of Germany approaches.

"The CIOS, formed by directive of the Combined Chiefs of Staff, operates to coordinate all technical intelligence activities in the European theatre for both

British and U.S. interests... As an advisory body to SHAEF, CIOS collects target information from any agency, requests SHAEF to secure or guard the targets where necessary and in some cases, it actually forms teams to exploit targets. Copies of all reports on technical intelligence in the European theater made by any U.S. or British agency are required to be furnished to CIOS which is then supposed to arrange for appropriate dissemination to agencies other than the originator of the report. The CIOS is essentially a London activity...

"The new TIIC (Technical Industrial Intelligence Committee)...is apparently a group which will operate in Washington to facilitate (and perhaps direct) the activities of representatives of U.S. industry in exploiting industrial intelligence targets in Germany.

"It becomes obvious that the growing interests of the Navy technical Bureaus in German technical intelligence cannot be handled under existing ALSOS arrangements alone. The Navy Department's interests in German science and technology are too vital and too comprehensive to permit them to be handled as a secondary adjunct to an Army intelligence activity, namely, the ALSOS Mission, to which the War Department itself entrusts only a small fraction of its analogous interests.

"It is therefore recommended that the Navy Department establish a Navy Technical Mission in Europe, to exploit German science and technology for the benefit of the Navy, using as a nucleus the Naval ALSOS group already established and in operation. This must be done quickly, if at all...Formation of such a Mission merely legalizes and recognizes activities which, in a smaller way, have already been conducted in the past without such recognition or authority and provides for an expansion to meet the growing interests of the Navy already evident among the technical Bureaus of the Navy Department..."

The Memorandum then proceeded to outline a proposed U.S. Naval Technical Mission in Europe, designed to meet the Navy's needs.

On 29 November 1944, Commander in Chief, U.S. Fleet and Chief of Naval Operations submitted Captain Schade's proposal to the Secretary of the Navy who approved it on 4 December. On 23 December Captain Schade was appointed Commodore, to serve as Chief of NavTecMisEu. On 26 December, Commander in Chief, U.S. Fleet and Chief of Naval Operations dispatched the letter formally establishing the U.S. Naval Technical Mission in Europe.

PRE-ACTIVATION PERIOD

The chief of Mission immediately set to work. He selected two supply officers who established a temporary office in Washington. He discussed with heads of Bureaus the question of their needs, and the personnel, both officer and civilian, which they would make available to the Mission. The Chief of Mission chose a number of officers from the various Bureaus to head up the corresponding Sections within the Mission, requesting that they report to Paris not later than 31 January 1945.

In a memorandum on organization dated 19 December 1944, the Chief of Mission estimated his future personnel needs as follows: (1)

Administrative	9 officers	27 enlisted men
Technical	36 officers	
Specialists (transient)	10 officers and 25 civilians	
Total	70 officers and civilians	27 enlisted men

Of this number, 16 officers and 15 enlisted men were already on duty with ALSOS. The memorandum stated that it was "possible to foresee a total personnel of approximately 100 who may be in Europe in connection with the activities of the Mission."

For the purpose of recruiting qualified technicians from industry, the Chief of Mission drafted a letter which the Bureaus sent to firms working with them on naval contracts. (2) The letter outlined the purpose of the Mission and requested the firms to release some of their technical personnel to the Mission on a temporary basis. The response was quick and satisfying. The Mission ultimately had access to more technicians than it was able to use.

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(1) See Appendix 8.
(2) See Appendix 7. Enclosure (A) to "Organization Memorandum" dated 16 December 1944.

An Organization Memorandum, dated 16 December 1944, prepared by the Chief of Mission stated: (1)

> ".... In choosing additional personnel for the Mission ....the desirability of some German language qualifications should be emphasized .... Technical qualifications should of course take precedence over language qualifications, but where they are combined in one individual, the best results will be obtained."

On 29 December 1944, the Director of Naval Intelligence announced, by memorandum, the establishment of Section Op-16-R in ONI, to serve as the "Navy Department representative of U.S. NavTechMisEu." (2)

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(1) See Appendix 7.
(2) See Appendix 9.

PREPARATORY PERIOD

During the period from the Mission's activation on 20 January 1945 until the Allies began to drive wedges into Germany east of the Rhine in late March, the Mission prepared for full-scale operations. Administrative headquarters were established in Paris, where they remained during the life of the Mission.

Sources of information on German intelligence fell roughly into four categories:

(a) inspection on the spot;
(b) interrogation of key personnel;
(c) documents;
(d) captured equipment.

Field trips to tap these sources were made in France, Belgium, Holland, Luxembourg and Western Germany as targets became available. As many newly-arrived officers as possible were sent on these trips for the additional purpose of gaining field experience.

Additional officer personnel were added to the Mission's permanent staff, including interpreters and trained P/W interrogators, some of whom had been operating on the continent since D-Day, collecting naval intelligence in the field. They included officers from:

(a) ComNavEu Forward Intelligence Unit;
(b) Mobile Explosive Investigation Units;
(c) Readiness Section, ComNavEu.

More vehicles were added to the motor fleet. Three airplanes, two C-47's and one JRF, were obtained.

To coordinate the activities of the various U.S. and British naval agencies in the field and to integrate these activities into the broader SHAEF organization, Naval Target Sub-Division (NTS) under G-2 Shaef was organized at a series of

conferences of interested parties. A NavTechMisEu officer was nominated U.S. deputy head of NTS. NTS controlled a 19-station field radio communications network.

Combined advanced field teams (CAFT) were organized. These teams were set up under CIOS, with personnel from member agencies indluding NavTechMisEu officers and technicians, for the purpose of quickly assessing, on the spot, targets on the CIOS target list. These teams' assessment reports were to be sent back to member agencies as guides for the detailed exploitation of the targets. CAFT teams were designed and organized to meet the contingency of a German military collapse, with the resultant sudden opening up of the entire German field of intelligence.

FULL-SCALE OPERATIONS (1)

By late February and early March 1945 several of the major German cities west of the Rhine were captured and opened for intelligence exploitation. In early March the first bridgehead was established on the east bank of the Rhine at Remagen. Within a month, American and British forces were driving deep into Germany, freeing large areas for exploitation.

CAFT and Mission teams which had been standing by, or were already in the field, fanned out behind the advancing armies.

To facilitate the far-flung activities of the investigators three forward headquarters were established:

(a) Bad Schwalbach (vicinity of Wiesbaden), in mid-April;
(b) Heidelberg, in late April;
(c) Bremen, in late May;
(d) Munich, in mid-July.

Working parties from the Mission's Supply Section went into the field to crate captured enemy equipment and ship it back to the United States. Documents were studied on the spot, and/or sent to Paris or London for more detailed examination. German individuals, leaders in their respective fields, were interrogated in their offices and laboratories, and/or sent to the U.K. or to Paris for detailed interrogation.

In late May, NavTecMisEu shifted its personnel from CAFT teams to Mission teams for the reason that the need for detailed exploitation of targets had succeeded that of quick assessment.

The Armistice with Germany on 9 May opened new sources of information and generally facilitated the Mission's operations, but it occasioned no major changes in field investigation routine.

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(1) See Appendix 19 and Appendix 30.

The Mission reached the peak of its activity during the months of May through August. From September on, fewer officers were in the field, the majority being in Paris writing their reports.

DECOMMISSIONING (1) (2)

Eventually the flow of German intelligence through the Mission was reduced to the point where maintenance of a special organization such as the Mission was no longer necessary. However, the flow of technical intelligence did not cease altogether. Furthermore, the Mission was engaged in a number of projects some of which would carry over into 1946.

These projects, pursued jointly with other U.S. or British agencies, were:

(a) Torpedo tests and Walter torpedo procurement, at Kiel.

(b) Shipment to U.S. of heavy armor for ballistic tests, from Meppen;

(c) Hydrogen peroxide supply program;

(d) Manufacture and tests of He-Oll engines, at Munich.

The Chief of Mission and the Head of the Technical Branch of the Mission discussed with the Chief of Naval Operations the question of transfer of supervision of this work from the Mission to another agency, at a conference in Washington on 27 September 1945. Upon his return to Europe, the Chief of Mission conferred with Commander, Naval Forces in Europe; Commander, Naval Forces in Germany, and the Naval Advisor to the Office of Military Government of Germany (U.S.).

On 1 October 1945 the Chief of Naval Operations dispatched a letter authorizing the Chief of Mission to decommission NavTecMisEu "on or about 1 November1945", and setting out directions for decommissioning. In compliance with this letter, a group of 11 officers was attached to the Naval Advisor to the Office of Military Government of Germany(U.S.) in Berlin, to terminate the Mission's pending projects. Th group was known as the U.S. Naval Technical Unit in Europe.

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(1) See Appendix 22.
(2) See Appendix 24.

Its mission completed, NavTecMisEu was decommissioned 1 November 1945.

INTERNAL ORGANIZATION

A. PLAN

INTERNAL ORGANIZATION PLAN

Chief of Mission. The Chief of Mission held himself as free as possible from office routine to devote his time to matters of policy, planning, and relations with other agencies and commands. He was obliged to travel extensively.

Executive Officer and Reorganization. During the early phases of the Mission's operations, all Sections were responsible directly to an Executive Officer. Activities later increased to such an extent that it became necessary to divide the burden. Accordingly, on 10 May 1945 the office of Executive Officer was eliminated. In its place, the Technical Branch and Services Branch, each under a senior officer, were established. Under these were placed the various Sections, each with a senior officer at its head.

The Chief of Mission held a weekly meeting with Branch and Section Heads to discuss the Mission's current business.

Technical Branch

The Head of the Technical Branch directed the following Sections:

(a) Ordnance
(b) Ships
(c) Air
(d) Yards and Docks
(e) Electronics
(f) Hydrogen Peroxide

The Technical Branch endeavored to prevent duplication of effort among the various Sections wherever possible by assigning officers and technicians investigating a highly specialized field to that particular Section in which such work was concentrated. Thus, the Electronics Section drew its personnel from various other Technical Sections. This same concentration of effort was made in the study of Guided Missiles and Hydrogen Peroxide.

Service Branch

The Head of the Service Branch supervised:

(a) Intelligence
(b) Supply
(c) Operations
(d) Administration

These activities were grouped under the following Sections:

(a) Intelligence Section, which controlled the interpreter force and target files;

(b) Operations Section, which supervised transportation and the Forward Headquarters;

(c) Administration Section, which supervised Personnel, Clerical and Photographic Sub-Sections.

(d) Supply Section, which supervised Disbursing, Supply and Shipping Sub-Sections.

INTERNAL ORGANIZATION

B. TECHNICAL BRANCH

ORDNANCE SECTION

Organization. Ordnance Section's investigations were grouped into the following general fields:

(a) Underwater ordnance;
(b) Guided missiles;
(c) Guns and mounts;
(d) High explosives and propellants;
(e) Fuzes;
(f) Bombs and projectiles;
(g) Armor;
(h) Aviation ordnance;
(i) Fire control and optics;
(j) H202;
(k) Metallurgy.

New Information. All phases of German Ordnance were exploited with a view to:

(a) incorporating new ideas and developments in current U.S. ordnance design against the Japanese;

(b) taking counter measures against information furnished the Japs by the Germans;

(c) utilizing new ideas and trends in U.S. long range research programs.

Generally speaking, no entirely new discoveries were made wherein German ordnance was in advance of U.S. Naval Ordnance, with several exceptions such as:

(a) H202.
1. Production of highly concentrated solid-free H202.
2. The many uses of H202 as an oxygen carrier for supporting combustion in connection with power plants and propellants.

(b) Projectiles.
1. Fin-stabilized projectiles.
2. Rocket-assisted projectiles.
3. Guided missiles.
4. High velocity guns.

(c) Anti-Aircraft fire-control - tri-axial mount.

(d) Four-element firing tube for use in electric time and impact fuses.

(e) Freak weapons, such as:
1. 400-foot gun, used on English Channel;
2. 31-inch bombardment gun.

These were considered of interest only because they were developed for special purposes peculiar to the local strategical situation.

Captured Enemy Equipment. The Ordnance Section made a particular effort to find specimens of enemy ordnance to ship to the United States for further study and tests. Hundreds of much valuable specimens, totaling hundreds of tons, in the many fields encompassed by the Ordnance Section, were located, crated and shipped to America.

Documents. A mass of German ordnance documents was turned up by investigators of various agencies. In the handling of documents, the rule by which originals went to the British caused considerable confusion, as many documents were removed from their source by British personnel without Mission personnel even being aware of their existence. In all cases where documents were found to be in the U.K., steps were taken to protect Mission interests. Microfilm copies of important documents were assured for the U.S. Navy. Close liaison was maintained with ComNavEu on document matters, and Mission representatives sometimes went to the U.K. to inspect documents.

Proving Grounds. Germany's Proving Grounds, fertile sources of information, were fully exploited by the Mission Ordnance Section for specimens and documents. Proving Grounds were numerous, extensive in scope, and were built on an enormous scale. The most important ones were:

(a) Unterluss, the most modern German Army, Navy and Airforce Research Proving Grounds;

(b) Killersleben, an army establishment;

c) Leppen, Naval Proving Ground, from which the Mission shipped 450 tons of heavy armor specimens to the United States.

Targets in Thuringia Area. When lines of demarcation marking the various Allied zones of occupation became known, the Ordnance Section immediately concentrated its efforts on targets in the territory then held by U.S. Forces which soon was to pass to the Russians, particularly targets in Thuringia.

The most important of these targets was the Zeiss works at Jena. This important factory was quickly and thoroughly exploited. Some 44 tons of valuable equipment, such as range finders and fire control telescopes, were removed and shipped to the United States.

Kochelsee Wind Tunnel. The most highly developed supersonic wind tunnel in Germany was discovered by U.S. Forces at Kochelsee, south of Munich. NavTecMisEu was particularly interested in the installation because it had an interferometer, "schleirin" photographic equipment, an advanced air drying and filtering system and a Mach number of 4.3. (Mach number is the multiple of the speed of sound.) In this tunnel the initial research was conducted on the V-2 Rocket, by the use of small scale models.

After Allied consultations in Washington, the tunnel was allocated to the U.S. Navy. The Mission took immediate steps to supervise disassembling and shipping the installation to the U.S., there to be reassembled.

Dismantling and shipping the tunnel was a huge project, requiring the services in the field of six Mission officers for more than three months. Thirty railway cars were needed to carry the installation from its location to the port of Bremerhafen. Some 30 boxes of the important measuring equipment were sent to the United States in a special shipment under the supervision of an officer designated for the task.

Co-ordination with U.S. Army. The Ordnance Section maintained close liaison with the large U.S. Army Ordnance Technical Intelligence Branch which, itself, pursued wide-scale investigations in the German Ordnance field. Reports were exchanged, and NavTecMisEu officers had access to the Army's ordnance files.

The U.S. Army Ordnance organization had its headquarters in Paris. It also maintained a large depot at Vincennes for captured enemy equipment. The Mission's Ordnance Section made good use of this depot, frequently finding leads on information and equipment there. The Mission used the storage facilities of the depot, also, for any of its own captured equipment which was too large for storage in the U.S. Navy garage.

SHIPS SECTION

Organization. Ships Section work fell into the following categories:

(a) Hull;
(b) Submarines;
(c) Machinery;
(d) Oil;
(e) Miscellaneous

Several special projects were handled under Ships Section supervision:

(a) Walter H202 turbine for U-boats;
(b) Exploitation of synthetic oil industry;
(c) Exploitation of German Naval Research center at Daenisch Nienhof;
(d) Collection of operating manuals and spare parts for captured submarines;
(e) Selection of desirable specimens of destroyers and "E" boats for return to the United States;
(f) Inspection of ships of the German Navy and Merchant Marine, jointly with the British and the Russians.

Among other subjects covered in Ships Section's investigations were:

(a) Closed cycle diesels;
(b) Boilers;
(c) Gears;
(d) Fire fighting - equipment and methods;
(e) Batteries;
(f) Periscopes;
(g) Schnorchel;
(h) "Sneak" craft, such as midget U-boats;
(i) Model basins.

In the course of its investigations Ships Section either inspected or found blue prints of, and specifications for, practically all German warships. Salient features were studied for Technical Reports.

Deschimag Shipyard at Bremen was a fruitful source of information. Bremen served as a base of operations for Ships Section officers in Northwest Germany.

Photographic Laboratory at Deschimag. The Photographic laboratory of the Deschimag Shipyards was taken over and rehabilitated by NavTecMisEu in early May. It produced a large amount

of work, not only for NavTecMisEu, but for other American and British agencies as well. The laboratory comprised three departments:

(a) Photographic;
(b) Blue print;
(c) Photostatic.

In all, 17 Germans worked under the supervision of a NavTecMisEu officer. An indication of the amount of work done can be gained from the following figures:

(a) Between 25,000 and 30,000 square meters of film were used;

(b) Approximately 170 rolls of blue print paper (size 1 1/3 x 25 meters) were used.

The Deschimag book-binding and printing establishment, with nine German employees, was supervised by NavTecMisEu in connection with the photographic laboratory.

New Information. The Ships Section's investigations revealed that German submarine developments were, in some phases, well advanced, particularly their high-speed under-water propulsion methods, their developments for operations submerged over long periods of time, and their work in closed cycle Diesel engines. German developments in small boats, "sneak" craft, saboteur equipment, and similar devices were far in advance of our own in many cases. Germans emphasized these devices because of operational conditions peculiar to European waters. Germany considered its surface fleet of secondary importance to its defense. As a result, little was found which compared with developments in the United States for our far larger fleet.

Documents and Captured Enemy Equipment. Ships Section frequently worked closely with the British in matters pertaining to captured documents and equipment. This co-operation was facilitated by the fact that items of interest to both U.S. and

British navies usually were of secondary interest to other agencies. The established routine was followed in handling captured documents and equipment -- first specimens to the British -- but frequent consultation was held in the field on the most equitable means of applying this policy in individual cases.

Joint Ship Inspection Party

The Potsdam Conference agreed to divide the remnants of the German Navy between the United States, Britain and Russia. Division was to be made on the basis of an inspection of all German vessels by a joint board.

Commander, U.S. Naval Forces, Germany requested NavTecMisEu to provide specialists for the joint inspection board (1). Accordingly, four officers from Ships Section, specialists in submarine and surface ship design and construction, were designated by NavTecMisEu.

All Baltic and North Sea ports where there were German vessels were visited. A Mission officer participated in the joint inspection of German warships in Scandinavian ports.

Immediately following the warship inspection, the Mission provided officers to join in a similar examination of German merchant vessels.

Walter Turbine and Walter Submarine

The H202 turbine developed by Professor Walter at Kiel was of particular interest to Mission investigators because of the high speed at which it could propel a submarine underwater -- up to 26 knots. Two of these turbines were found on test stands

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(1) ComNavForGer Fwd's despatch of 161600C August 1945.

in the Walterwerke, one of 2,500 h.p., and the other (not yet completed) of 7,500 h.p. In consultation on a high echelon with the British, it was agreed that the U.S. Navy should remove the 2,500 h.p. engine to the United States. NavTecMisEu personnel supervised this work at the Walterwerke throughout the summer of 1945. The British removed the uncompleted 7,500 h.p. turbine to the United Kingdom.

Subsequent to the negotiations for the 2,500 h.p. turbine, a number of scuttled or uncompleted submarines containing the Walter unit were located. These units were divided between the United States and Britain. One of the Walter U-boats, the U-1406 which had been scuttled, was raised and sent to the United States. Sufficient new parts to completely rebuild the extensively damaged ship were manufactured or found, collected, and shipped to the United States.

Synthetic Oil Study

Origin. To initiate study of foreign methods of the production of sythetic naval fuels, the Navy Department sent an officer with oil processing knowledge to Great Britain in February, 1944. In September, 1944, this officer proceeded to the Continent with instructions to make a complete study of the composition, properties, and methods of manufacture of all synthetic German naval fuel oils.

The Oil Study Group on the Continent operated first under ComNavEu Readiness Division, later under Navy ALSOS, and on 30 January 1945, joined NavTecMisEu. The party was small. It originally had its own transportation. Most members spoke German.

Targets. The Fischer-Tropsch process for obtaining synthetic fuel oil was of vital interest, as it produces a Diesel fuel with the highest known octane number -- 88. Thus the Kuhlmann plant at Harnes (Lille), France, was one of the Group's priority

targets. The Harnes plant was the only one of its kind in the world then operating.

In preparation for the later studies of German plants, the Oil Party visited French plants associated with the synthetic oil industry.

The first field trip into German territory was begun 15 March 1945. The target was the Rheinische Braunkohl A.G., Wesseling (Cologne).

In April the Oil Party concentrated on the Leuna Werke, near Merseburg, and the Ludwigshafen targets of the same company. From 16 May to 1 June 1945, the Oil Party concentrated on the numerous Ruhr Valley targets. At Witten, the Party investigated a synthetic butter plant with 40,000 "cow-power" capacity.

The German Naval Research Laboratory

The Mission made a thorough investigation of the Chemisch-Physicalische Versuchs Anstalt (Chemical-Physical Research Establishment) at Danisch-Nienhof, the German Navy's leading research laboratory. Key personnel were interrogated at length. Written reports were obtained from them. The Mission sent a Petty Officer to microfilm documents found at the CPVA. Microfilms of German scientific studies already made by the German staff prior to the fall of Germany were collected.

AIR SECTION

Organization. The Air Section's work fell into four categories:

(a) Guided Missiles;
(b) Power Plants;
(c) Aircraft Design;
(d) Miscellaneous, under which were included such subjects as medicine, aerology, equipment, armament, training, materials, metals, paints and finishes and photography.

One officer was in charge of the investigations in each of the four categories.

Shipment of Planes to the U.S. One of the projects undertaken by the Air Section, outside of routine investigations, was the gathering together of special types of German airplanes for delivery to the United States. This was done jointly with the U.S. Army Air Forces. Thirty-nine planes were flown to Cherbourg, where they were lifted aboard an aircraft carrier for shipment to America. Nine of the planes were earmarked for the U.S. Navy:

(a) 5 Me-262s (jet);
(b) 2 Arado-234s (jet);
(c) 2 Do-335s (Propellors both fore and aft).

Jet Engine Factories. The U.S. Navy concluded an agreement with the U.S. Army Air Forces and the British Royal Air Force whereby each undertook the exclusive study and exploitation of one of Germany's leading jet engine manufacturers. It was agreed that full information would be exchanged. The division was as follows:

U.S. Navy -- Heinkel Hirth Motorenwerke, manufacturers of the He 011 (jet engine) and He 021 (gas turbine); located at Stuttgart

U.S. Army Air Forces -- Bayrische Motorenwerke, manufacturers of the BMW 003, 018 and 028; located at Munich.

R.A.F. -- Junkers Motorenwerke, manufacturers of the Jumo 004, 012, and 022.

Co-ordination with other Agencies. Air Section members worked closely with the U.S. Army Air Forces investigators. They

exchanged information, and at times sent joint teams to investigate targets.

Combined Air Documents Research Center (CADRC). Formation of the Combined Air Documents Research Center in June 1945 was a major step in co-ordination of work in air subjects. CADRC was organized by U.S. and British Naval, Military and Air Force representatives, including officers from the Mission Air Section, to handle the mass of captured documents.

The purposes of CADRC were to:

screen
assess
index
reproduce
distribute

enemy documents. It was organized to function on a five-year basis:

(a) during the first year, documents usable in the war against Japan were to be given top priority in handling;

(b) during the second and third years, all useful material was to be processed;

(c) the fourth and fifth years were to be devoted to assembling the documents for historical purposes.

After the formation of CADRC, all air documents were channeled to its headquarters in London. On occasion, Mission investigators brought documents to Paris for use in preparing reports before forwarding them to CADRC. No document was to be retained by any organization, however, unless other member agencies agreed that it was a duplicate.

Guided Missiles Sub-Section

A separate Guided Missiles Sub-Section was set up on 2 June 1945 to study the mass of information in this complex field. In the Sub-Section were gathered officers from Air, Ordnance, and Electronics Sections, working as a team. The final two-volume report, which resulted from this effort, dealt in detail with

German accomplishments in the following types of guided missiles:

(a) ground to air;
(b) air to air;
(c) air to ground;
(d) ground to ground.

Further studies were made of launching mechanisms, control systems, and fuze developments.

The leading men in German rocket and missile work were interrogated by the Sub-Section. One of the key men, Dr. Wagner, of Henschel, was evacuated to the United States for further exploitation.

U.S. Joint Working Group. (1) NavTecMisEu Officers participated in the United States Joint Working Group for Guided Missiles which, on 1 September 1945, published a report giving:

(a) a list of Guided Missiles reports;

(b) a list of stabilization, steering, fuzing, telemetering and miscellaneous controls for Guided Missiles;

(c) reports on meetings held by the Guided Missiles Group.

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(1) See Electronics Section for further information on the U.S. Joint Working Group.

YARDS AND DOCKS SECTION

Targets investigated by officers of the Yards and Docks Section fell into two principal categories:

(a) advance base;
(b) general information and planning.

These two categories covered a wide field. The Bureau of Yards and Docks requested information on 45 different subjects.

Even though the German Navy had no advance bases in the wide sense known to the U.S. Navy, investigations were made into German development of such diverse equipment as cargo handling, gear, portable telephone switchboards, laundry equipment, dry ice machines, fog and smoke generating equipment, etc.

Targets. The Section kept its own target file which it checked periodically with that maintained in the Intelligence Section. The CIOS target list was found not specific enough for Yards and Docks interests.

In the early stages of the fighting in Germany, Yards and Docks personnel investigated targets by areas. Later, however, it was found more efficient to assign targets to investigators by type, rather than by geographical area.

The field covered by the Yards and Docks Section was so broad that frequently representative installations or equipment were selected for detailed examination and report.

Among those investigations by the Yards and Docks Section which produced new information or information of greatest interest to the Navy in the Yards and Docks field were:

(a) Floating Cranes and Dry Docks; a report was made on a 350-ton floating crane, the largest in the world;

(b) Underground factories; emphasis was placed, not on what they produced, but on how they were constructed;

(c) Bomb-proof structures;

(d) Oil storage construction;

(e) German airfields;

(f) Seaplane bases;

(g) Wind Tunnels;

(h) Construction equipment;

(i) Submarine cables;

(j) Laboratories;

(k) Anti-fouling paints.

ELECTRONICS SECTION

Origins. The Mission's early plans called for Electronics investigations to be carried out by Ships Section. In practice it was found expeditious to form a separate Section because:

(a) the men in the field were specialists;
(b) the group was small;
(c) when Electronics men of all Sections worked together, these Sections mutually benefited.

An officer who had been examining captured electronics equipment in the United Kingdom and on the Continent since July, 1944 was ordered to the Mission as head of the Section.

Section's Mission. Subjects covered by the Electronics officers were:

(a) Radar;
(b) Sonar (underwater sound);
(c) Infra-Red;
(d) Radio;
(e) Acoustics;
(f) Electric proximity fuzes;
(g) Electronic homing devices; namely:

    (1) naval,
    (2) aircraft, and
    (3) anti-aircraft;

(h) Guided Missiles;
(i) X-Ray equipment for metallurgy.

Co-ordination With Other Agencies. The Electronics Section worked closely and profitably with other electronics agencies in the field. This co-ordination was effected principally by the formation of two separate groups:

(a) Committee on Captured Enemy Electronics Equipment for Technical Intelligence Purposes (COCEEE)
(b) United States Joint Working Group (for Infra-Red and Guided Missiles investigation.)

COCEEE was founded in London in the summer of 1944 by representatives of U.S. and British Navy, Army and Air Forces in the electronics field. COCEEE's purpose was to:

(a) allocate captured enemy electronics equipment other than the first specimen, which went to the British in accordance with joint agreement.

(b) exchange electronics information.

COCEEE proved valuable to all participants. Among other things it reduced pointless competition in the field. It also published valuable lists of captured electronics gear.

The Joint Working Group was a purely American Agency whose membership was drawn from:

(a) Air Technical Intelligence, U.S.S.T.A.F.;
(b) U.S. Army Ordnance;
(c) Corps of Engineers, U.S.A.;
(d) Signal Corps, U.S. Army;
(e) U.S. Navy

The group worked in close, effective and productive cooperation in the two major fields it covered, namely, Infra-Red and Guided Missiles. Joint field teams were organized; joint reports were written.

On 1 August 1945 a report was published by the "United States Joint Working Group on German Infra-Red Military Research and Development", giving:

(a) a list of reports on infra-red, by agency, citing all known reports, either finished or in preparation;

(b) lists of infra-red equipment, components, and radiation characteristic studies, with sub-paragraphs for each item;

(c) reports on all meetings of the Infra-Red Group.

The report was distributed to the Navy, Signal Corps, Corps of Engineers, Army Air Forces, TIIC, ALSOS Mission and the Office of Scientific Research and Development. These agencies circulated the report as they saw fit.

HYDROGEN PEROXIDE SECTION

The high concentration at which the Germans were able to manufacture and handle H202, and the multiple uses to which they put H202 as an oxygen-carrier, attracted the interest of the U.S. Navy. German war industry was using, with a minimum of mishaps, concentrations up to 85 percent. The Walterwerke, Kiel, alone was working on 46 different projects based on the use of H202.

A Section eventually was formed in the Mission with five officers and two civilian technicians to integrate the Mission's various investigations of H202.

The H202 projects undertaken by NavTecMisEu can be summarized as follows:

(a) find and arrange for delivery to the Navy Department 1200 tons of concentrated H202 by the end of February 1946, for experiments and tests;

(b) find and arrange for delivery to the United States H202 storage tanks and pumping equipment of a total of 1240 ton capacity;

(c) locate and arrange for use 100 H202 railway tank cars of which 80 would be used for trans-atlantic shipments;

(d) compile technical intelligence reports on the manufacture, handling, transportation and storage of H202; its chemical and physical properties.

In April 1945, a pilot plant at I.G. Farben, Ludwigshaven, with a one-ton per day output of concentrated H202, was disassembled and shipped to the United States.

The first tank car of H202 under the 1200-ton program (see (a) above) was shipped to the United States in September, 1945.

INTERNAL ORGANIZATION

C. SERVICE BRANCH

INTELLIGENCE SECTION

Establishment. The Intelligence Section, as such, was established 11 February 1945. Prior to that date the duties of the section had been carried out in decentralized fashion by several Technical Sections of the Mission. Administratively the Section was carried as a Services Branch activity.

Personnel. The Section Head, five Prisoner of War Interrogation officers, and two enlisted men constituted the entire complement of the Section at its inception. This group, as members of the ComNavEu Forward Intelligence Unit, had been engaged in field intelligence work on the Continent since D-Day. They were, when taken over by the Mission, the most experienced naval field intelligence officers and men in the Theater. They were, therefore, "naturals" for the Mission's needs.

Upon the establishment of the Section, its head and one other of the above officers undertook, with one of the enlisted men, the organization of the Section's office activities. The four remaining officers and man were immediately dispatched to the field to assist technical officers in their dealings with German scientists and other individuals. Their language qualifications, their previous experience as interrogators of German P/W's and their familiarity with U.S. Army field procedure were their principal assets at this time.

This small force steadily expanded under the Mission's growing demand for German language officers, until, at the zenith of its activities, the Section carried on its roster 38 such officers plus two enlisted men also qualified in languages. The additional officers were recruited from CTF ONE TWO FOUR (whose cooperation in this matter is worthy of mention), from Op-16-Z, and other Naval activities, including BuPers.

Just prior to the Section's reaching its peak load, its office force was augmented by an additional administrative officer, obtained from ComNavEu.

Section Responsibilities. The Section had three main duties:

(a) Assignment and supervision of interpreters;

(b) maintenance of "target" files and index of intelligence information;

(c) maintenance of library of road and other maps, and the supplying of miscellaneous information.

Interpreters. Some interpreters were assigned on a semi-permanent basis to individual Technical Sections and about half were retained in an interpreter pool. Those assigned to the specific Sections made field trips with officers of that Section, and assisted them later in report writing by translating pertinent German documents. Constant work in one Section increased the interpreter's proficiency in the technical vocabulary and trade jargon of the branch of German technology under investigation by his particular Section.

Intepreters in the pool were on call for field or translation work for any Section as the need arose.

Experience showed that security consciousness was practically non-existant among German scientists and other individuals of interest to the Mission, making the services of interpreters, as differentiated from trained Prisoner of War Interrogators, adequate. After cessation of hostilities, the German Navy was directed by Admiral Doenitz to furnish the Allies all information requested. This policy quickly spread to the entire nation and greatly simplified the obtaining of information.

Card Index Files. (1) Had the Mission not been armed with organized "target" information, it would have dispersed its

(1) See Appendix 13.

energy inefficiently and perhaps fruitlessly. (A "target" was any enemy firm, person, place or installation of technical interest to the U.S. Navy.) To properly arm the Mission in this respect the Intelligence Section founded and maintained card index files on:

(a) targets by geographical location;

(b) targets by subject matter;

(c) targets according to firms' or individuals' names;

(d) technical reports compiled by the Mission and other organizations, arranged according to originating agency;

(e) technical reports arranged by subject matter.

Insufficient personnel made it impossible to satisfactorily maintain files (b) and (c); but files (a), (d) and (e) proved to be of vital assistance to field investigators. Among other things, they permitted field teams to arrange their itineraries before leaving headquarters, and to know in advance, while moving forward with the armies, what targets lay immediately in front of them.

This filed target information was gathered from every major intelligence agency available to the Allied Forces.

The purpose of files (d) and (e) was to simplify the locating in the Mission's main file room of reports written by all Intelligence agencies. Thus, technical officers, before going into the field, could brief themselves on information previously gathered by other intelligence organizations regarding targets in which they were interested. Upon return from investigation trips, technical officers likewise had this information at hand for ready reference while compiling their own reports. At one time the Mission was on the distribution list of 47 agencies for such reports.

Maps. An extensive map library was assembled by the Intelligence Section from the Office of the Chief Engineer, Com-Z, ETOUSA. A rough situation map was maintained paralleling the Operations Section's more detailed map. In addition, Baedeker and town plan information was at hand.

OPERATIONS SECTION

During the Mission's early days the Transportation Officer handled operational details, such as obtaining Army Clearances, connected with departure of investigation teams for the field.

By 1 March 1945 the expanding volume of field work necessitated setting up an Operations Section under an Operations Officer. Later, another officer, a yeoman and a storekeeper were added to the office staff.

Operations Section's duties were:

(a) supervise field teams in other than technical matters:

(1) brief teams on field procedure;
(2) obtain clearances;
(3) approve travel order requests;
(4) arrange and provide transportation;

(b) supervise Forward Headquarters;

(c) supervise the Mission's air and ground transportation.

Air Transportation

The Mission, during the months of its greatest activity, had its own planes, two C-47's, for general duty in moving field teams and equipment, and one amphibious plane (JRF) which was held at the disposal of the Chief of Mission. Frequently, the C-47's would fly a field team, with jeep and trailer, to its destination in the field. For a while, additional C-47s were obtainable on call from the Army. At times, as many as four such planes were on Mission flights in one day.

The C-47s and their crews were obtained from the U.S. Army Air Force. Subject to alteration to meet special needs and to the weather, the following flight schedules were maintained at the peak of the Mission's work:

Paris - Bremen - Paris ..... 3 weekly
Paris - Berlin - Bremen - Paris ..... 1 weekly
Paris - Wiesbaden - Munich - Paris ..... 2 weekly

By 1 August, NavTecMisEu planes had put down at 35 different airports in:

Germany	England
France	Norway
Holland	Denmark
Belgium	Austria
Luxembourg	

The following figures represent an average one-month workload for the two C-47s:

flying hours	200
miles flown	30,000
passengers carried	500
pounds of mail carried	1,500
pounds of cargo carried	100,000

Ground Transportation.

NavTecMisEu took over the following transportation from Navy ALSOS on 20 January 1945:

12 jeeps
10 jeep trailers
1 sedan
2 carry-alls
3 command cars
3 2½-ton GMCs

One officer and five enlisted men maintained this fleet. On March new vehicles were added, bringing the totals to:

29 jeeps
19 jeep trailers
1 sedan
2 carry-alls
6 command cars
4 2½-ton GMCs
1 lubrication trailer
1 ordnance van
1 weapons carrier

Nineteen enlisted men were added to the maintenance crew at this time.

By the first week in June, the Ground Transportation group comprised:

150 vehicles;
1 Transportation Officer;
44 enlisted men mechanics and drivers;

4 French civilian workers, for greasing, tire repair, etc.;
16 French divilian drivers with their cars, for transportation in the Paris area.

The Paris base provided vehicles for all of the Mission's Forward Headquarters.

NavTecMisEu was alloted one entire deck and part of another in the ComNavForFrance garage in Paris.

Problems. The Transportation Officer occasionally was hard pressed to obtain additional vehicles to meet rapidly expanding requirements of the Mission. In one emergency, he borrowed 10 jeeps from the U.S. Army for one month.

Shortage of tools and spare parts handicapped the Ground Transportation group. The U.S. Army maintenance pools co-operated generously in helping the Transportation Officer to meet these needs.

Forward Headquarters.

NavTecMisEu established advance bases at Bad Schwalbach, Heidelberg, Bremen and Munich to facilitate operations of field teams. These headquarters provided:

(a) billets;
(b) mess;
(c) transportation;
(d) motor service;
(e) shipping facilities;
(f) office facilities.

(1)

Villa Lilly at Bad Schwalbach. Villa Lilly Headquarters at Bad Schwalbach was a wooded estate which had been used by the Nazis as a lying-in home for unwed mothers. It was the largest of the Mission's Forward Headquarters. Mission officers who found and opened this establishment arranged with the U.S. Army to have German telephone workers repair the line from Villa Lilly to Bad Schwalbach thence to Wiesbaden, where the line was plugged into 12 Army Group switchboard.

(1) See Appendix 20.

Organization. Villa Lilly Headquarters was established by authority of the Commanding General 12 Army Group on 17 April 1945. It was operated as a separate command under articles 24, 26 and 64 of Navy Regulations. CTF ONE TWO FOUR, in accordance with standing directives, supplied necessary personnel and logistic support. The Headquarters was divided into the following divisions:

(a) headquarters;
(b) supply and commissary;
(c) first lieutenant;
(d) motor pool.

Six officers, including one doctor, and 50 men manned the establishment. An idea of Villa Lilly's activity can be gained from figures for a single day, Wednesday, 13 June 1945, chosen at random from Headquarters' records:

Station officers on board	4
Visiting NavTecMisEu field officers	12
Other visiting officers	2
Visiting enlisted men	0
2½-ton cargo 6 x 6	2
1½-ton personnel carrier	1
1½-ton cargo truck	3
4 x 4 weapons carrier	1
Jeeps	15
Jeep trailers	3
Jeeps serviced for field trips	9
Command Cars	2

Villa Lilly could accommodate approximately 45 visiting Mission Officers. During the first several months, Negro mess attendants manned the galley and wardroom and did general housework. They later were replaced by local German women through an arrangement made with the U.S. Army. These German civilian employees were efficient, and in general highly satisfactory.

Bremen. (1) Bremen Headquarters, set up in May 1945, became the base for investigations in Northern Germany. It was located in a large requisitioned dwelling in the residential section of the city. It could accommodate approximately 30 visiting officers.

NavTecMisEu personnel operating out of Bremen, especially the Ships Section personnel working in the Bremen shipyards, were

(1) See Appendix 20.

constantly in residence at the Bremen establishment. An office was set up for them at the Deschimag Yards, and office space was available for them with CTF ONE TWO SIX in Das Haus des Reiches in downtown Bremen. The administrative section was broken down as follows:

(a) Headquarters building;
(b) transportation;
(c) offices;
(d) shipping.

Two officers and 26 men manned the Bremen establishment. As many as eighty German civilians assisted, most of them working inside the Deschimag Shipyards, many of them as draftsmen, clerks and technical assistants.

Munich. (2) On 11 July 1945, a Forward Headquarters was established near Munich, adjacent to an airfield which the Mission used for several weeks as a base for crating and shipping equipment captured in Southern Germany. One officer and four enlisted men operated this local headquarters which could provide accommodations for 14 officers and 20 enlisted men. German civilian women worked in the galley and wardroom and did general housework. The Villa Lilly Headquarters established and staffed this base.

Heidelberg. In late April 1945, a Headquarters was established at Heidelberg, in a former Postoffice School for telegraphers. Equipment and personnel were brought from Villa Lilly for this base. The Heidelberg establishment was discontinued in May when its usefulness had passed.

(2) See Appendix 20.

ADMINISTRATION SECTION

Early Period. During the first weeks of the Mission, before field operations had begun on a large scale, all administration duties were concentrated in the hands of one officer, aided by eight Yeomen. The Administrative Officer's duties were:

(a) supervise the clerical staff;
(b) supervise the photographic laboratory and personnel;
(c) personnel duites;
(d) route mail, technical reports and dispatches;
(e) make up watch bill;
(f) allot room space in Mission Headquarters;
(g) establish standard correspondence procedures;
(h) miscellaneous.

Expansion. The rapid expansion of the Mission's size and work load brought a corresponding increase in demands upon the Administration Section. In mid-April the Photographic Sub-Section was founded, followed shortly by separate Clerical and Personnel Sub-Sections.

Shortage of Enlisted Personnel. The first estimates of the number of enlisted personnel the Mission would require did not make adequate provisions for the Administrative Section. As increasing numbers of officers and civilian technicians came to the Mission, and as field teams began producing reports to be typed and photographic work to be done, the Administrative Section found itself without sufficient personnel to meet the new needs. WACs, U.S. Army enlisted men and French civilians were added to the staff to partially relieve the situation.

Photographic Sub-Section

Origin. The Mission's first administrative plan did not provide for a Photographic Sub-Section. One Phomlc did all the photographic work, under the direction of the Administrative Officer. Later four additional enlisted men were added.

Eventually the increase in photographic work was so great that the Administrative Officer was unable to directly supervise photography in addition to his other duties. Accordingly, on 13 April 1945 a photographic officer was obtained on TAD basis from the ComNavEu V-Mail [redacted] Section.

Organization. Work in the Photographic Sub-Section fell into two categories:

(a) photography;
(b) microphotography.

The photographic work consisted of issuing cameras and films for field trips, processing all films exposed by technical officers on field trips and supplying such officers with copies of pertinent prints to illustrate their reports. In special cases Petty Officer photographers were sent with field parties. Microphotography was the most expedient means of reproducing the countless German documents of interest to the Mission. Film reproductions of the documents capable of being read in a microfilm viewer were included as enclosures to many reports. In three instances a microphotographer was flown to a target from Advanced Headquarters with full field equipment to microfilm documents which were to become the property of another agency, documents which were of immediate interest to the Mission.

Personnel. To meet increasing demands on the Sub-Section two Seamen were "converted" into photographers in late April. A Sp(P)1c arrived shortly thereafter. By 15 June, 10 French civilians, the majority of them specialists in photographing babies, were engaged.

On 25 June all but one of the French civilians were replaced by 12 U.S. Army enlisted men on loan from the U.S. Army V-Mail Office. This emergency loan was negotiated informally, at a relatively low echelon.

When this Army personnel became available to the Mission, the Photographic Sub-Section went on a 24-hour schedule to microfilm 1,400 pounds of captured documents brought in by the Air Section alone.

At peak production, the Sub-Section had one naval officer, seven petty officers, three seamen, 12 soldiers, one WAC and one French civilian. On 1 September 1945 the arrangement whereby the soldiers had been lent to the Mission terminated.

On 30 July 1945 seven Photos were requested from Buaer. Six arrived 8 September 1945.

Equipment. In the infancy of the Sub-Section, equipment was lacking. Only one small 35mm Kodak enlarger was available when the Photographic Officer took over. There were no cameras available for field work, although some officers brought Navy cameras from Washington and London. Eventually, however, the Sub-Section had 37 Vigilant cameras and 25 captured German Rolleicords, obtained from the Army.

Much equipment, including movie cameras, portrait cameras and color film, arrived from the U.S. after the Photographic Officer took charge. Orders for this equipment had been placed by various Mission officers while photography was still being handled by the Administrative Officer.

Equipment for the dark room and for microfilming was incomplete when the Sub-Section was established but deficiencies were made up later.

Supply. Supply was the big battle of the Sub-Section. Chemicals and other supplies were borrowed from the ComNavEu V-Mail Section. A large quantity of supplies ordered in January 1945 to cover six months needs arrived 14 April. But so rapidly had the Mission's work expanded, this order met only 10 percent

of its eventual requirements. The ingenuity of the Photographic Officer and the Supply Officer was taxed to supply the daily needs. At one time, when a supply of 45,000 sheets of photographic paper had arrived from the U.S., another 190,000 sheets had to be obtained from the U.S. Army in Paris.

Every possible source of supply was tapped. Other U.S. Naval Commands in the Theater were canvassed. On several occasions the Mission's Forward Headquarters in Bad Schwalbach obtained confiscated Agfa paper from the U.S. Army. Arrangements were made with the U.S. Army General Purchasing Agent to obtain material from the firm Gevaert, Antwerp, under reverse lend-lease. On one occasion the Mission bartered off some of its rare excess equipment to the U.S. Army for a complete captured German film processing plant. In fact, the record would not be complete without observing that the good will and weakness for barter of the U.S. Army, particularly five photographic units in Paris, were invaluable aids to the Photographic Officer in keeping the Sub-Section functioning during the peak-load period.

Future Planning Suggestions. In view of the importance of Photography to a technical mission a Photographic Officer should be included in the organizational plan from the beginning, to devote full time to such questions as supply, equipment and personnel.

Clerical Sub-Section.

When the Administrative Branch was expanded in Mid-April, a WAC officer and 20 enlisted women were obtained to reinforce the clerical staff of about 50 enlisted men. The Clerical Sub-Section's principal job was to balance the clerical personnel against the typing demands of the various sections. Greatest demands on the Clerical Sub-Section began mid-way through the Mission's life,

when officers and technicians commenced returning to Paris in large numbers, their field investigations completed, to write their reports.

Personnel Sub-Section.

Origin. The Personnel Sub-Section was activated 28 May 1945 when the Personnel Officer arrived.

Personnel. At the beginning one officer and three yeomen handled the personnel work. When the Mission's activities expanded the staff was increased by one yeoman and two WACs.

Duties. The duties of the Sub-Section were:

(a) write orders (Due to the fluid character of the Mission the Personnel Officer probably wrote more orders than any naval command in the Theater - - and with a curtailed staff. As more and more targets became free for Mission exploitation, speed in issuance of orders became increasingly important.):

(b) welfare and recreation;

(c) demobilization affairs;

(d) local transportation; this included administration of the French civilian drivers;

(e) issue arms to field parties;

(f) issue daily situation report (location of personnel)

(g) issue Mission bulletins and watch bills;

(h) billet officers and enlisted men.

Sub-Section Difficulties. Personnel assigned to the Mission on temporary duty orders, of which there were a large number, presented a problem, because their papers remained at their permanent duty station.

SUPPLY SECTION

Establishment. A supply officer and an assistant supply officer for NavTecMisEu were chosen by the Chief of Mission in December, 1944 in Washington, before the Mission was established formally. The Supply Section worked in an office in OMI until it moved to Paris in January, 1945.

Personnel. The Supply Section commenced operations on the Continent with two officers and two enlisted men. As the Mission grew, the Section expanded. On March 10, 1945, the Section had three officers and 19 enlisted men. During June and July, 1945, at the peak of the Section's activities, it had three officers and 62 men, the majority of whom were in the Shipping Sub-Section. The additional personnel were drawn largely from Naval Construction Battalion units in other theater naval commands.

Emergency Funds. The Bureaus provided the Mission approved requisitions amounting to $100,000 for regular and emergency purposes. Only a small part of this was used.

Army Cooperation. Co-operation of the U.S. Army was invaluable. Except for its willing help, the lifting of cargo probably would have been seriously delayed.

Sub-Sections. The Supply Section comprised three Sub-Sections:

(a) Supply;
(b) Shipping;
(c) Disbursing.

Supply Sub-Section

Commander in Chief, U.S. Fleet and Chief of Naval Operations' letter establishing the Mission in part:

> " Existing Naval activities in Europe will furnish the Mission necessary assistance in the form of transportation, billeting, office space, provision of junior administrative personnel, clerical assistance, etc... "

Further:

> "... The Chief of Mission is authorized and directed...
>
> "(c) To obtain necessary assistance from United States Naval Authorities in Europe.
>
> "(d) To obtain necessary assistance from United States Army Authorities in Europe..."

The Supply Officer interpreted the above to include matters of supply. The Mission Supply Officer ordered in the United States a limited supply of items which he thought would be critical in the forward areas, such as labor-saving devices, photographic equipment, protective clothing, instructional equipment, S and A, and Standard forms.

After the Supply Section moved to Paris, it encountered numerous difficulties:

(a) the Mission grew faster and to greater size than had been anticipated;

(b) some supply officers -- not all, however -- in other naval commands in the Theater, were reluctant to provide equipment to the Mission; frequently, the equipment they did turn over was cast-off;

(c) some material ordered from the United States arrived late, some never arrived.

The Supply officer met these difficulties by tapping all available sources, "scrounging" for whatever necessities he was unable to procure in time through routine channels.

The Supply Sub-Section provided equipment not only for the headquarters, but equipped field teams with complete army field uniforms, and other necessary gear as well.

Shipping Sub-Section.

Crating and shipping of captured enemy equipment to the United States was the Shipping Sub-Section's principal work.

On 1 November 1945 a total of approximately 9,400 tons had been shipped by sea to the United States. A total of approximately 50 tons of priority equipment had been dispatched by air to the United States.

Working parties frequently were sent into the field to crate captured equipment on the spot. For example:

(a) a working party crated 350 tons of captured enemy equipment located in a Luxembourg mine;

(b) a party worked seven weeks at an airport near Munich crating equipment for the Air Section;

(c) two parties worked three weeks in the Wiesbaden area collecting equipment and trucking it to Paris;

(d) a party, aided by 25 Germans, crated material for shipping at the Deschimag Shipyards in Bremen throughout the summer.

Until 1 July all equipment intended for shipment to the United States was carried by railway or truck through Paris. After that date, some equipment was sent directly to various ports. The paper work on all shipments was done at Paris. Ports used for shipments to the United States were:

Bremen	Antwerp
Bremerhaven	Le Havre
Naples	Cherbourg
Genoa	Marseilles
Rotterdam	

Two German floating cranes, one of 350 tons and the other of 250 tons, were used in loading equipment on ships.

An estimated 750,000 board feet of lumber were used for crating.

In Paris, the incompleted roadway by-pass tunnel around St. Cloud, used formerly for German Torpedo Stores, was used as a crating and storage depot until an epidemic of thefts made it necessary to move this activity to the Navy garage which was under a relatively more effective guard. The St. Cloud tunnel continued to be used, however, for crating any item weighing more than one ton.

Some of the major jobs in which the Shipping Sub-Section participated were:

(a) dissassembling and shipping a factory from Ludwigshaven;

(b) lifting a 195-ton submarine aboard a ship for transport;

(c) crating and shipping several V-1 and V-2 projectiles;

(d) placing 39 airplanes aboard an airplane carrier in Cherbourg;

(e) moving tank cars of concentrated H202 to Cherbourg and Antwerp and on to ships for transportation;

(f) disassembling, crating, and shipping a wind tunnel, from Southern Germany.

Disbursing Sub-Section

In the early days of the Mission, the Supply officer took care of disbursing duties.

In time, however, this work grew to the point where it was necessary to have the full-time service of a Disbursing Officer.

The new Disbursing Officer assumed his duties 4 May 1945. During the Mission's peak period he was assisted by one chief petty officer and two enlisted men in the Disbursing Sub-Section.

Work of the Disbursing Sub-Section differed from routine disbursing office activties in the following respects:

(a) the Disbursing Officer had to be prepared to pay every day, rather than on a designated pay day, as officers were constantly leaving for, and returning from, forward areas;

(b) eight different currencies were handled:

German	Dutch
French	Belgian
Swiss	British
Danish	United States

(c) the great majority of the Mission's officers were on TAD; thus there were per-diem claims to be settled;

(d) the turnover of officer personnel in the Mission was large and continous;

(e) personnel in three forward headquarters were paid from the Paris baseby a pay team flown forward by air.

The Disbursing Office was transferred to the Mission's Forward Headquarters at Bad Schwalbach on 18 May 1945, in the belief that this would prove a more central and advantageous location for pay purposes. The reverse was found to be the case, however, due principally to the fact that Paris remained the clearing point through which officers constantly were moving to and from the United States. So, the Disbursing Officer moved back to Paris 10 days after the transfer.

Thereafter, the Disbursing Officer regularly visited Bad Schwalbach to pay personnel until 29 August 1945, on which date those pay accounts were transferred to CFT One Two Four at Frankfurt.

The Disbursing Officer also visitied the Mission's Bremen Forward Headquarters through May, June, and July for pay day, after which time personnel were paid by check, mailed from Paris. Personnel in the Munich Forward Headquarters were paid by check.

SECRET

RELATIONS WITH OTHER ORGANIZATIONS

SECRET

SHAEF
COMNAVEU
COMNAVFORFRANCE
COMNAVGROFRANCE
COMNAVFORGER

The question of the Mission's relations with SHAEF and with various U. S. Naval Commands in the Theater was one, which, if mishandled, could have hampered seriously the Mission's activities.

By NavTecMisEu Directive, the Chief of the Mission was "to be regarded as the direct representative of the Commander in chief, United States Fleet and the Chief of Naval Operations" and "should be given the maximum freedom of action consistent with operational Naval and Military requirements." Preservation of this relative independence of action under the Directive, while operating within othter Army and Navy Command areas posed delicate problems.

It was realized at the beginning that the Mission would rish an awkward situation if the Chief of the Mission were to report directly to SHAEF, the Supreme Command Headquarters in the Theater, for this would place the Mission directly under SHAEF's naval reporesntative, ANCXF. ANCXF was predominately a British-staffed organization, although it contained U.S. representation.

To avoid this potential embarrassment, the Mission's Directive was so worded as always to place a local U.S. naval command between SHAEF and the Mission. Paragraph 6 of the Directive stated:

"As a U.S. Naval Organization in Europe, the Naval Technical Mission will be subject to the Military control and orders of the Commander, U.S. Naval Forces, Europe. The Chief of the Mission, as commanding officer, will report to the Commander, Nav l Forces, Europe in person."

The Directive stated further:

"The Chief of the Mission will be further directed to report to the senior U.S. Naval authority in the areas to be exploited."

The Mission's realtions with the various Naval Commands, then, may be summarized as follows:

(a) under the operational command of the Chief of Naval Operations;

(b) under ComNavEu for administrative purposes;

(c) to report to the senior U.S. Naval authority in the area to be exploited.

Fortunately, the few misunderstandings which arose in connection with NavTecMisEu's relations with other Commands were quickly straightened out without difficulty. The Mission was able to preserve its relative independence of action throughout.

Logistic Support. Paragraph 5 of the Mission's Dirdctive stated:

"Existing Naval activities in Europe will furnish the Mission necessary assistance in the form of transportation, billeting, office space, provisions of junior administrative personnel, clerical assistance, etc."

Thus:

(a) ComNavEu provided the Mission with transportation and various supply items;

(b) ComNavForFrance provided office space in Paris, billeting for officers and civilian technicians (in the Hotel Royal Monceau) and enlisted men, in Paris, and various supply items;

(c) ComNavGroFrance, same as ComNavForFrance, which it succeeded;

(d) ComNavForGer staffed the Mission's three forward headquarters in Germany; NavTecMisEu assigned a liaison officer to ComNavForGer;

(e) All of the above commands contributed personnel to the Mission, particularly enlisted men.

SECRET

NAVAL TARGET SUB-DIVISION (NTS)

The Naval Target Sub-Division of G-2 SHAEF was officially established 22 March 1945 by SHAEF G-2 Memorandum No. 39.(1). Actually, NTS was in operation from about 20 February 1945.

Functions. NTS functions can be summarized as follows:

(a) to co-ordinate activities of field investigations teams exploiting naval targets;

(b) integrate information from all sources on naval targets, for use of naval field teams;

(c) arrange army clearence for target exploitation teams;

(d) maintain a situation plot showing location of all field teams;

(e) keep a current record of all field personnel and their qualifications;

(f) maintain target index, recording visits to targets and results obtained;

(g) inform field teams of current directives on handling captured enemy equipment, documents, and reports;

(h) maintain a field radion communications network;

(i) advise all naval intelligence interests and requirements concerning:

1. technical and scientific investigations;
2. prisoner of war interrogations;
3. captured enemy naval documents;
4. CIOS field team operations(naval);
5. requests for special equipment.

Background. Throughout the summer and fall of 1944, several U.S. and British naval intelligence-gathering agencies operated in France independently, of each other. As time went on, experience demonstrated the desirability of co-ordinating their various efforts, particularly in view of the impending collapse of germany with a resultant opening up of the entire German intelligence field.

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(1) See Appendix 14.

S E C R E T

Means of achieving this co-ordination were discussed in London between ComNavEu and the Admiralty in December, 1944 and January, 1945. ComNaveu drew up proposals for a co-ordinating agency, to which the Admiralty made counter-proposals. It was at this stage that NavTecMisEu entered the negotiations, upon the Chief of Mission's return from Washington in January. He immediately agreed in principle to the establishment of such a co-ordinating agency.

Further negotiations followed between representatives of NavTecMisEu, ComNavEu, ComNavForFrance, SHAEF, and ANCXF (British officers of ANCXF presented Admiralty's views) resulting in the agreement as published in SHAEF G-2 Memorandum of 22 March 1945. (1)

Throughout the negotiations, the Chief of Mission was successful in his careful efforts to preserve the freedom of action he considered necessary for the carrying out of the Mission's Directive.

Among other things, he insisted:

(a) that NTS be an organization to serve, rather than direct, member agencies;

(b) that NavTecMisEu retain the right to duplicate other agencies' investigation of any target if the Mission felt that such a duplication would be useful.

The Chief of Mission maintained that "the philosphy of operation of NavTecMisEu should be that it be given the maximum opportunity of fulfilling its mission within a framework of limitations designed ONLY to prevent it from interfering in any way with the prosecution of the war in the European Theater." (2)

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(1) See Appendix 14.
(2) See Appendix 11 for further arguments of the Chief of Mission supporting these points.

S E C R E T

Organization. NTS was organized under the Special Sections Sub-Division, G-2 SHAEF, with offices at Versailles, France, later at Frankfurt-am-Main, Germany.

A Royal Navy Captain, Intelligence Officer for ANCXF, was designated Head of NTS, with NavTecMisEu Commander as Deputy and acting Head. NavTecMisEu's officer was finally withdrawn from his full-time duties with NTS on 22 July 1945, upon dissolution of SHAEF. The several other officers employed were drawn half from the British and half from the U.S. Navy.

Communications. NTS operated a field radion network comprising 16 field teams, two sub-headquarters at SHAEF. This latter was British-manned. Ten of the field teams were British, six were U.S. (provided by ComNavForFrance).(1) The field teams were equipped with SCR-399 radio trucks.They were scattered strategically thoughout tht the occupied area, setting up usually with army communication units. They were moved according to the shifting needs of field teams who were kept informed of the stations' locations. NTS communication teams operated from 28 February to 30 May 1945. During its peak period the communication system handled as many as 50 messages a day. On one occasion for a period of several days the NTS network was the only communication system available to one army echelon.

Field teams used the radio network to report their movements, findings, requests, etc., back to their respective headquarters.

Clearences. The most complex problem handled by NTS was that of obtaining clearences for field teams to operate in the various army command areas. Local army commands sometimes were unusually jealous of their prerogatives in controlling intelligenceexploitation within their territories.

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(1) The six U.S. Teams comprised two officers and 55 men. U.S. teams operated in 29 different locations.

Occasionally teams were required to clear through echelons as low as Division. Frequently the tactical situation caused legitimate restrictions to be placed on movements of intelligence gathering teams. For example, during the critical days of the German break-through below Liege in December 1944--January 1945, no field intelligence teams were allowed to proceed to this area.

The problem of clearances was complicated by the fact that areas controlled by various army units constantly were shifting. Futhermore, policy of the army commanders in the matter of clearances varied with the command. T-Forces ameliorated clearance difficulties somewhat.

The routine for obtaining clearances was through the army chain of command -- from agency to NTS to SHAEF to Army Group to that Army whose area was to be visited; and back again. This usually required several days. NTS -- and member agencies -- never ceased their efforts to speed up the process. (1)

Co-Ordination of Information and Exploitation. Incoming target assessment information and technical intelligence received from many souces were studied to insure that both the British and U.S. Navy Intelligence Teams were informed. In many cases combined intelligence exploitation teams were arranged.

Target Assessment Files. An excellent card file of technical intelligence targets was maintained in geographical order. On these cards notations were made as to the value of the target, as indicated by assessment reports received from the army sources at SHAEF. Thes cards were maintained up to date throughout the spring and summer of 1945. The eventually were recognized as the most complete target evaluation file in the Theater.

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(1) In this connection see:
    a) Appendix 16.
    b) Appendix 15.

Conclusion. NTS was extremely useful to NavTechIntEu. It had shortcomings, to be expected in any organizations improvised to meet an urgent need. But it accomplished its fundamental purpose of co-ordinating the work of Naval investigation agencies. In so doing, it spared all member agencies a great deal of confusion.

COMBINED INTELLIGENCE OBJECTIVES SUB-COMMITTEE (CIOS)

CIOS was created by a directive fo the Combined Chief's of Staff, as an advisory body to SHAEF, it undertook to co-ordinate all technical intelligence activities in the European Theater, both U.S. and British. The U.S. Navy was one of its 14 members. CIOS operated from London. It compiled target and personality lists on a priority basis for guidance of exploitation teams. It organized Consolidated Advance Field Teams(CAFT) for quick assessment of targets, and sent its won teams from London to the Continent for detailed exploitation of targets.

NavTechMisEu's relations with CIOS were as follows:

(a) NavTechMisEu, through the U.S. Navy member, was represented on CIOS;

(b) NavTechMisEu provided 36 officers and civilian technicians to CAFT teams;

(c) A NavTechMisEu officer was co-chairman of the CIOS Naval Group (Group 6) and such was a member of CIOS secretariat;

(d) NavTechMisEu sometimes sent officers and civilian technicians to CIOS field teams for joint exploitation of certain targets;

(e) Both CIOS and NavTechMisEu operated in the field through FTS;

(f) Full exchange of information.

CIOS field teams, for the most part, were large, slow moving and unwieldly. They were dependent on SHAEF for transportation. The Mission found, by experience, that its teams worked more expeditiously alone than when attached to CIOS teams. Accordingly the Mission attached personnel to CIOS teams only when it was expedient to do so.

CONSOLIDATED ADVANCE FIELD TEAMS (CAFT)

Organization. Consolidated Advanced Field Teams (CAFT) were organized by CIOS, with personnel from CIOS member agencies, to make a quick assessment of priority intelligence targets in the event of a general collapse of the German armies.

CIOS recognized that its routine procedure for forming field teams was "not adequate for conditions of rapid advance." (1) So it rearranged its target priority list of 50 types of technical interest into seven groups each encompassing related items and organized CAFT teams for each group. A NavTechIsEu officer was co-chairman of the Naval Group. A CAFT team representing each target group was assigned to the three (21,12, and 6) Army Groups on the Western Front. Seven additional teams were formed for possible airborne operations to Kiel and Berlin, and to certain targets in Russian occupied territory. These latter operations never materialized. Altogether, the CAFT plan called for 283 officers and technicians, of whom NavTechIsEu provided 36.

NavTechIsEu Participation. NavTechIsEu's reasons for cooperating in the CAFT undertaking were:

(a) NavTechIsEu did not dispose sufficient personnel to alone cover its target list quickly enough in the event of a German collapse;

(b) To further the policy of co-operation with the other information-gathering agencies in the field;

(c) To avoid needless duplication of effort;

(e) It provided a means whereby NavTechIsEu personnel could be the first ones to enter targets.

Operations. CAFT teams began operation in March 1945, when Allied forces began their drive into Germany east of the Rhine.

(1) See Appendix 12.

They sent back to NTS their reports on targets by letter, telephone and dispatch, using the NTS and army communications network. After V-E Day the importance of CAFT operations diminished. Accordingly, NavTechMisEu in agreement with CIOS Secretariat, withdrew its personnel from CAFT as of 20 May 1945.

Results. Some of the major difficulties encountered by CAFT were:

(a) shortages of transportation;

(b) uncertain communications;

(c) occasional confusion in the question of army clearances for targets;

(d) tendency on the part of CAFT members to assess a target from the point of view of their particular interests, neglecting other technical interests.

Despite these shortages and handicaps, however, it may be said that CAFT operations were useful to NavTechMisEu.

T-FORCE

T (for Target) Forces were created by a SHAEF directive in all Army Groups on the Western Front as service organization for all long-range intelligence gathering agencies in the field.

T-Force functions could be summarized as follows:

(a) occupy and guard intelligence targets immediately after those targets were captured by combat troops;

(b) billet and feed intelligence investigators at or near the target locality;

(c) maintain an index of targets being exploited in the area with street or other addresses;

(d) require all intelligence teams to submit brief exploitation reports after visiting targets, for the information of other teams interested in the same targets;

(e) provide escort and guard troops for intelligence teams wherever required;

(f) ship to proper authorities captured documents and enemy equipment, after checking same for possible operational interest of value to the Army;

(g) provide limited transportation facilities;

(h) provide motor pool facilities, including oil and gasoline dumps, for intelligence team vehicles;

(i) provide communications.

T-Forces served, generally speaking, as SHAEF's agent to deal with intelligence-gathering organizations such as NavTechIsEu in the field. A T-Force thus acted as middle-man between intelligence gathering agencies and the local commands. In an area where a T-Force was operating, a T-Force pass usually was sufficient authorization to work freely in that area regardless of what Army, Corps, or Division was in control.

T-Force comprised a permanent staff of officers and a number of combat units detached from their regular duties for T-Force work. T-Forces were elastic in thei size and organization.

They were highly mobile and therefore able to move quickly from place to place, as fruitful fields of intelligence were captured and opened up for exploitation.

T-Forces were equipped to fight for targets in emergencies.

After V-E Day, Army commands established a number of semi-permanent camps, scattered strategically throughout Western and Central Germany, to supplement T-Forces in accomodating intelligence personnel in the field. At such camps, billets, mess, target lists, transportation, and clearances were available.

T-Forces operated in the British, as well as U.S. areas. However, some special naval targets in the British area were occupied by 30 Assault (later Advance) Unit, a British Naval and Marine organization.

ALSOS MISSION

ALSOS Mission was established by the U.S. Army for the purpose of investigating secret scientific developments of the enemy. A Naval section was formed upon invitation of the Army. NavTecMisEu's Chief of Mission continued to serve as Senior Naval Member (1) of the ALSOS Mission even after NavTecMisEu was established and after the officers comprising Navy ALSOS had been transferred to NavTecMisEu. The two organizations exchanged information and sometimes made joint field investigations.

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(1) See Appendix 2.

ADMIRALTY.

NavTecMisEu had relations indirectly with the Admiralty through a number of organizations, such as NTS and CIOS, and through contact in the field with the Admiralty's 30 Assault (later Advance) Unit. Formal contact generally was made through ComNavEu.

30 AU was an intelligence gathering organization whose purpose roughly paralleled that of NavTecMisEu. It comprised Naval Intelligence Officers and a force of Royal Marines equipped to fight for intelligence targets if need arose.

NavTecMisEu and 30 AU kept each other advised of targets they were investigating and exchanged information in general through NTS. In the field, representatives of the Mission and 30 AU frequently extended to each other the courtesy of their messing and billeting facilities. At times they jointly exploited targets.

FIELD INFORMATION AGENCY, TECHNICAL (FIAT)

Field Information Agency, Technical (FIAT) was established 31 May 1945 under G-2 SHAEF for the principal purpose of aiding U.S. and British civilian agencies to exploit German economic, industrial and technological sources. (1) Upon dissolution of SHAEF, the U.S. section of FIAT was transferred to U.S. Group Control Council, and the British wing to the Major General, Intelligence, Control Commission for Germany (British Element).

NavTecMisEu's liaison officer with FIAT constituted the Naval Section. NavTecMisEu used FIAT as a channel for obtaining release of enemy equipment in the British and French occupied zones.

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(1) Appendix 17, for directive establishing FIAT, see also Appendix 18 and ComNavEu Intelligence Report X-2275, dated 7 September 1945, for status report on FIAT.

OPERATIONAL SUBJECTS

REPORTS

Reports to the Navy Department covering technical information were made in the following forms, in order of the urgency of the information they contained:

(a) dispatch;
(b) Letter Report;
(c) Technical Report.

Technical Reports were generally comprehensive and complete, carrying the incomplete information previously contained in dispatches and Letter Reports. All communications were addressed to Op-16-PT. In case of Technical reports, covering letters and copies of the reports also were sent to interested Bureaus or Agencies. Documents or equipment, of which there was only one available specimen, were sent to Op-16-PT with the request that they be transmitted to the interested Bureau of Agency. (1)

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(1) See Appendix 21.

CAPTURED ENEMY DOCUMENTS AND EQUIPMENT

Working Principle. Early in the War, an agreement was reached between the U.S. and British Commands whereby the first specimens of captured enemy equipment were to be allocated to the British. The agreement applied primarily to enemy marine mines. This principle, however, was continued throughout the War, even after the invasion of the continent, and was generalized to include first specimens of all captured enemy equipment and originals of documents.

The theory upon which the joint agreement was based was that such documents and equipment could be studied more quickly in the U.K. than in the U.S. for operational use in the war against Germany. While this principle was logical at the time the agreement was made, after the invasion and collapse of Germany it operated to the definite disadvantage of the United States.

Documents. (1) For handling captured enemy naval documents, a Document Center was established in the Admiralty by agreement between the Admiralty and ComNavEu. At this center the U.S. Navy was represented by a group of U.S. Naval officers qualified in the analysis of enemy documents. Microfilm copies of unique documents were made for the U.S. Navy.

In theory, all captured enemy naval documents pass through this center. In practice, however, Mission officers sometimes brought duplicate copies of documents to Paris for use in writing reports and for transmittal on to Washington. Occasionaly, documents of which only one copy of each had been found, were brought to Paris for microfilming before being sent to the Admiralty Document Center. This was done under agreement with the British.

(1) See Appendix 23.

After V-E Day, there no longer was an operational use in Europe for captured documents. Accordingly, on 14 May 1945 at a meeting in London attended by the Chief of Mission, officers from ComNavEu, and the Admiralty, it was agreed that if any captured document would aid in the prosecution of the war against Japan, the original should go directly to the United States and a copy be given to the British.

Equipment. By joint agreement of the High Commands, first specimens of enemy equipment captured by U.S. forces were turned over to the British. In the case of a unique specimen, U.S. - British consultation sometimes was held to determine its disposition, although the British were not required to do this under the directives.

No clearing center ever was set up for captured equipment, as was done in the case of documents. After a British-found specimen had been ear-marked or removed, duplicates frequently were shipped in quantity to the United States.

Late in May 1945, ComNavEu attempted to get the British to agree to release the first specimens to the United States on the grounds that henceforth German equipment had operational value only in connection with the Japanese war. The British replied that they felt a modification of the principle was unnecessary but that individual cases should be decided as each arose.

Implementing Agreements. A Combined Air Documents Research Center (CADRC) was established early in June 1945 for the purpose of handling enemy air documents. NavTechMisEu's Air Section was a party to this arrangement.

For allocation of captured enemy electronics equipments Committee on Captured Enemy Electronics Equipment (COCEEE) was formed in London in the summer of 1944. NavTechMisBu's Electronics Section was a member of this Committee.

6. Conclusions. Mission Officers felt that the CINCPAC directive according the first document or specimen of equipment to the British worked unduly to the disadvantage of the U.S. Navy, particularly after V-E day, for the following reasons:

(a) in some fields, U.S. research and testing facilities were superior to those in Britian;

(b) some documents and equipment were of operational value in the war against Japan -- exclusively so after V-E day -- and the U.S. Navy was carrying the burden of the naval war against Japan.

INTERROGATION CENTERS

Frequently, the interrogation of German scientists, technicians and prisoners of war at the targets was not sufficiently exhaustive for Mission purposes. For further interrogation of such persons, the facilities of several establishments were available to, and used by, the Mission.

London. Several Germans of interest to both the Mission and British authorities were taken to facilities in London for interrogation by U.S. and British officers.

DIC at Revin. The U.S. Army established a Detailed Interrogation Center at Revin, France, in late 1944, primarily for the interrogation of military prisoners. Mission officers and technicians conducted several interrogations there. This DIC moved to Bad Schwalbach, Germany, in the summer of 1945.

"Backporch". An interrogation center, with code name "Backporch", was established near Paris by the U.S. Army on 1 August 1945 for enemy civilian scientists and technicians. NavTecMisEu was alloted space at this center for eight such persons. Individuals brought to "Backporch" by U.S. agencies other than the Mission were available to the Mission as well.

Other Interrogation Centers. Several additional interrogation centers were established by the U.S. Army in Germany, France and Luxembourg for various categories of detained enemy personnel, and were available to the Mission for interrogation purposes.

RUSSIAN-OCCUPIED GERMANY

NavTecMisEu and other U.S. and British investigating agencies attempted to gain permission to visit known intelligence targets in Russian-Occupied Germany, but the Russians successfully blocked these attempts. Three projects for visits within the Russian zone failed to materialize:

(a) a team was organized in the Spring to visit Gdynia, on reports of torpedo information there;

(b) a team was organized for Danzig, to investigate submarine targets;

(c) CIOS wished to send teams, on which NavTecMisEu would have been represented, to investigate some 30 targets in the Russian zone.

Negotiations for these projects were carried on at a high level but without success.

However, in the jointly-occupied cities of Berlin and Vienna, Mission teams finally were able to investigate targets, even those in the Russian-occupied sections of the cities. These targets were only moderately productive.

NavTecMisEu officers on the Joint Ships Inspection Party visited Russian-occupied Baltic ports in Germany, but their duties were confined strictly to the work at hand; namely, that of assessing the German fleet.

S E C R E T

INVESTIGATIONS IN NEUTRAL COUNTRIES.

NavTecMisEu officers pursued investigations on a limited scale in neutral Switzerland and Sweden. These trips fell into two categories:

(a) running down leads on German intelligence in these countries;

(b) special requests from the Navy Department to study technical projects of purely Swiss or Swedish character; such investigations were not covered by the Mission's terms of reference, but were undertaken upon Washington's request, as the Mission was the organization on the spot most competent to do the work.

The same policy was followed in those countries of our Allies which had been occupied -- France, Belgium, Holland and Norway.

Visits of Mission officers to Sweden and Switzerland were held to a minimum.

CASUALTIES.

The Mission suffered no combat casualties, although many officers were under fire. Officers and civilian technicians were cautioned by the Mission not to expose themselves needlessly to enemy fire, on the dual theory that the Mission was not a combat organization and that a live investigator was worth more to his country than a dead one.

Two Officers and five Petty Officers were killed in airplane and motor accidents. Four Officers, one Petty Officer, two seamen, and one civilian technician were injured in accidents. (1)

(1) See Casualty List, Appendix 25.

PERSONNEL

Officers and civilian technicians ordered to the Mission by the Bureaus were classified under three categories:

Category 1 -- specialists requested by the Mission for staff or specific assignment;

Category 2 -- specialists in a particular field not currently covered by the Mission and available to the Bureaus for special assignment.

Category 3 -- technically qualified individuals from the Bureaus or from industry whose professional association with the Bureaus was such that a visit by them to areas available to the Mission would be in the interest of the Bureaus.

CRITICAL SUMMARY

DEFICIENCIES

NavTecMisEu had no precedent upon which to pattern its wide scope of activities, which would mark the pitfalls and emphasize special needs. Furthermore, the Mission had to reckon with a fluid military situation on the Western Front. As a result, it was forced to improvise frequently to meet unforseen contingencies. The major difficulties which beset NavTec MisEu are summarized in the following paragraphs.

Basic Estimates Were Too Low. When NavTecMisEu was organized, the subsequent rapid expansion to the size it eventually attained was not anticipated. It was estimated that a maximum of 100 officers, civilian technicians and men would operate with the Mission at any one time. Actually, the final figure was in excess of 750. As a result, the Mission had to combat a chronic shortage of service personnel, such as typists and photographers, and of office equipment and supplies.

Tours of Duty Too Short. Many officers and civilian technicians were sent to the Mission for such short periods that they were unable to satisfactorily exploit their targets, even when extensions were obtained. Longer tours of duty, in principle, would have been more satisfactory.

Insufficient Briefing. Technical investigators sometimes undertook field investigations without full briefing on information already obtained from the enemy in their particular fields. Such briefing should have been done both in Washington and at Mission Headquarters.

Language Difficulties. The Mission faced a shortage both of technical personnel who spoke German, and interpreters who were trained in technical subjects. The best remedy for this situation was the assignment of interpreters to a Technical Section on a semi-permanent basis, so that the interpreter could,

with experience, familiarize himself with the field in which he was working. The importance of knowledge of the enemy language to investigating personnel cannot be over-emphasized.

Target List. Duplication of the NTS target list for the Mission files would have been useful, and was intended. The magnitude of the job and lack of equipment prevented its being done, however. This list not only indexed targets but was annotated from day to day to show what agencies had exploited each target, with results obtained.

Fuller Exploitation of Enemy Personnel. Potentialities of interrogation of enemy scientists was not fully realized at the beginning of the Mission's work. In the later phase, however, this source of information was better exploited.

Planning Officer Needed. The Mission could profitably have designated an officer to devote his full time in over-all planning and organizing future operations in detail. This would have been especially valuable in the early months, when individual Sections were mapping their investigation programs. During this period, the Mission's senior officers met to discuss problems as they arose.

Difficulties Originating Outside the Mission. NavTecMisEu had to cope with many problems, solution of which lay beyond its immediate power. Some of these were:

(a) red tape and delay involved in getting clearance through Army units for operations in the field;

(b) need for an interrogation center in Paris before "Backporch" was established;

(c) the joint decision to allocate first documents and first specimen of captured equipment to the British; this worked to the undue disadvantage of the Mission, particularly after V-E Day;

(d) The Bureaus in Washington sometimes requested information which already had been forwarded in Mission reports, indicating that circulation of Mission information in the Navy Department may have been at times slow or erratic.

MISSION STRENGTH

NavTecMisEu had a number of features which gave it particular strength, and which should be borne in mind for any similar organization which might be set up in the future.

Independence. The Directive gave NavTecMisEu a wide measure of operational independence from local commands by making the Chief of Mission "the direct representative of the Commander in Chief, United States Fleet and the Chief of Naval Operations." This fact was an unquestionable asset to NavTec MisEu in its operations.

Elasticity. The Mission's organization was elastic. With but few exceptions, officers came to NavTecMisEu on temporary additional or temporary duty. Furthermore, officers and civilian technicians were encouraged to use their own initiative in their investigations. The Mission provided the facilities and the investigators worked as they saw fit, within, of course, military restrictions.

Mobility. The Mission had sufficient motor transportation -- planes, jeeps and trucks -- to permit easy movement over wide areas. This mobility was necessary to successful operation. It gave the Mission an advantage over a number of other field investigation agencies which were not so highly motorized.

Forward Headquarters. Strategically placed Forward Headquarters, in northern, western-central and southern Germany materially facilitated the Mission's field activity, permitting intensive operation over a wider area than would have been possible without advance bases.

Civilian Technicians. NavTecMisEu profited from the expert talents and knowledge of the Civilian Technicians, drawn from industries engaged in U.S. Navy work, who participated in the Mission's field activities. In addition, an indirect benefit redounded to the favor of both the Navy and these industries:

although Civilian Technicians made their formal reports on their findings exclusively to NavTecMisEu, they could not but take back to their permanent positions a broader conception of their fields gained by personal investigation in Germany, of German science and technology.

High Quality of Personnel. The qualifications of the Mission's officers -- staff personnel, investigators and interpreters -- and Civilian Technicians were consistently high.

S E C R E T

Roster of Officers

Name	Mission Section
Lt. Cdr. J. ADAIR, USN	Ships
Lieut. R.C. ALDRICH, E V(S), USNR	Ships
Lt(jg) P.E. ALLEN, S(A), USNR	Aeronautics
Lieut. J.P. ANDEREGG, (E)L T, USNR	Head, Electronics Section
Lieut. A.H. ANDREWS, Jr., C V(S), USNR	Aeronautics
Comdr. H.A. ARNOLD, USN	Ships
Lieut. R.H. BAIST, S(A), USNR	Operations
Lt(jg) A. BAKKEN, (D), USNR	Operations
Lt.Cdr. J.A. BARIOL, USN	Ships
Lieut. J.S. BEDDIE, S(I), USNR	Intelligence
Comdr. F.W. BELTZ, USN(Ret)	Special
Comdr. P.F. BENDER, (S), USNR	Intelligence
Lieut. R.J. BENDER, (S), USNR	Ships
Lt.Cdr. M.A. BIOT, S(A), USNR	Aeronautics
Lt(jg) H.L. BLACKWELL, Jr., D(L), USNR	Ordnance
Lieut. H.D. BLANCHARD, (S), USNR	Intelligence
Lieut. R. BLOOM, Jr., S(E), USNR	Special
Lt.Cdr. W. BOLLAY, S(A), USNR	Aeronautics
Lieut. R.S. BOWMAN, D, USNR	Intelligence
Comdr. C.C. BRAMBLE, S(O1), USNR	Aeronautics
Lieut. E.G. BRANDS, D(L), USNR	Ordnance
Lieut. T.W. BROECKER, S(I), USNR	Intelligence
Lt.Cdr. C.H. BROOKS, S(O4), USNR	Ordnance
Lieut. J.D. BROWN, (A1), USNR	Transient
Lt.Cdr. K.S. BROWN, USN	Ships
Lieut. T.S. BROWN, S(E), USNR	Ships
Ens. D.I. BROWERS, USNR	Ordnance
Lt.Cdr. S. BRUNAUER, S(O4), USNR	Special
Lieut. S.W. BRYANT, S(A), USNR	Aeronautics
Lt(jg) E.D. BUIE, USN	Ships
Lieut. G.M. BUIVID, USNR	Aeronautics
Lt(jg) L.C. BUYSE, S(L), USNR	Intelligence
Comdr. C.D. CASE, USN	Special
Lt.Cdr. R.H. CALVERT-LINK, S(E4), USNR	Transient
Lieut. P.B. CASTLETON, D(L), USNR	Intelligence
Lt(jg) H.A. CHAMBERLIN, Jr., D(L), USNR	Ordnance
Comdr. P.H. CHANCELLOR, (A), USNR	Aeronautics
Lieut. C.[illegible] CHATTAWAY, S, USNR	Intelligence
Comdr. F.M. COATES, S(A), USNR	Aeronautics
Lieut. W.F. COLEMAN, S(O5), USNR	Ordnance
Lieut. C.L. CONNOR, S(E3)T, USNR	Electronics
Lt.Cdr. A.B. COOK, (S), USNR	Special
Lt.Cdr. R.A. COOLEY, (S), USNR	Ordnance
Capt. C.F. COLTON, USN	Aeronautics
Lieut. G.P. DALE, S(O3), USNR	Ordnance
Lieut. W.G. DAVEY, S(I), USNR	Transient
Lieut., K.M. DAVEE, (S), USNR	Transient
Lt.Cdr. L.M. DEARING, S(A), USNR	Aeronautics
Lt.Cdr. J.R. DEBAUN, S(A), T, USNR	Electronics
Capt. L. DE FLOREZ, SA, USNR	Aeronautics
Lt(jg) C.D. DE MARIA, (CEC), USNR	Operations
Lt.Cdr. C.L. DE MURALT, (S), USNR	Intelligence
Capt. J.P. DEN HARTOG, E-V(S), USNR	Ships
Lieut. D.P. DERRY, USN	Operations
Lieut. H.A. DESMITTERS, SC, USNR	Supply
Lt(jg) D.R. DE WEY, III, S(E), USNR	Ships

Roster of Officers (cont.)

Name	Mission Section
Lieut. P. DIBBLE, S(I), USNR	Intelligence
Lt(jg) T.A. DICKEY, SA, USNR	Aeronautics
Capt. W.S. DIEHL, USN	Special
Lt.Cdr. G.E. DIMITROFF, O-V(S), USNR	Ordnance
Comdr. E.M. DINGLEY, Jr., E-V(S), USNR	Transient
Lieut. W.R. DORREY, S(O5), USNR	Ordnance
Lieut. P.H. DONOVAN, S(C), USNR	Special
Lt.Cdr. H.W. DREXEL, (S), USNR	Intelligence
Comdr. J.W. DUNLAP, D-V(S), USNR	Aeronautics
Lt(jg) F.J. DURZO, S(O3), USNR	Ordnance
Lieut. F.A. EDGINGTON, S(O1), USNR	Ordnance
Lieut. H.P. EARLE, S(I), USNR	Special
Lieut. E.E. ECKLUND, A(L), USNR	Electronics
Ens. P. EISENBERG, S(E), USNR	Ships
Lt.Cdr. D.K. ELY, USN	Ships
Lt(jg) B.L. EMERY, (A)T, USNR	Intelligence
Lt(jg) R.C. ENGEMOEN, S(O3), USNR	Ordnance
Lieut. R.E. ERIKSON, CEC, USNR	Yards-Docks
Lieut. G.W. EWALD, S(A), USNR,	Aeronautics
Lt.Cdr. D.D. FEDER, (S), USNR	Yards-Docks
Lt.Cdr. I.F. FIKE, (LDO), USN	Ships
Ens. R.A. FINKEL, D, USNR	Ships
Lieut. C.A. FISHER, S(A), USNR	Intelligence
Lt(jg) H.M. FOGEL, O-V(S), USNR	Ordnance
Lieut. W.E. FOLEY, S(I), USNR	Transient
Lt.Cdr. R.B. FORWARD, AL, USNR	Ordnance
Lieut. R.J. FRANZ, III, S(O6), USNR	Transient
Lieut. G.A. FRIEDERICI, D(L), USNR	Ordnance
Lt.Cdr. H.F. GALINDO, E VISO, USNR	Transient
Lieut. A.D. GAMBACH, (A), USNR	Air Documents
Lieut. J.R. GANTNER, S(O), USNR	Transient
Lt(jg) R.L. GELLEIN, S(O4), USNR	Ordnance
Lieut. F. GERRETSON, S(A), USNR	Ordnance
Lieut. G.E. GIESECKE, (S), USNR	Intelligence
Ens. D. GILBARG, S(O), USNR	Ordnance
Lt.Cdr. E.S. GILFILLAN, Jr., O-V(S), USNR	Transient
Lieut. J.E. GILLEN, Jr., (DE), USNR	Special
Lt(jg) B.V. GMAU, O-V(S), USNR	Ordnance
Lt.Cdr. W.P. GOEPFERT, S(A), USNR	Aeronautics
Ens. T.G. GORDLEY, D(L), USNR	Ordnance
Lt(jg) J.W. GOULD, E(L), USNR	Ships
Capt. A.H. GRAUBART, USN	Transient
Lieut. H.V. GREENOUGH, Jr., E-V(S), USNR	Electronics
Lt(jg D.H. GRIDLEY, S(O3)T, USNR	Ordnance
Lieut. M.R. GROSSDA, USN	Aeronautics
Capt. J.L. GROW, USMCR	Electronics
Ens. E.G. HADERLIE, D(L), USNR	Ordnance
Lt.Cdr. H. HALL, S(A)T, USNR	Electronics
Capt. C.C. HALPINE, USN	Special
Lieut. K.A. HARKER, S(A), USNR	Aeronautics
Capt. P. HARRISON, DE-V(G), USNR	Special
Lieut. H.H. HART, I-V(S), USNR	Ordnance
Lieut. H.T. HARDENBURG, USNR	Intelligence
Lieut. G.W. HEBERT, A(L), USNR	Transient
Capt. R.S. HATCHER, USN	Special
Comdr. H.C. HASKELL, S(A), USNR	Aeronautics
Lieut. W.D. HASELDEN S(O), USNR	Ordnance
Lt(jg) C.W. HEENAN, S(O6), USNR	Ordnance
Lieut. A.F. HILAR, USN	Special
CWO. O.L. HINSON, CEC, USNR	Ordnance

Roster of Officers (cont.)

Name	Mission Section
Lieut. O.H. HILTON, S(I), USNR	Intelligence
Lieut. S.C. HEMINGWAY, Jr., A(1), USNR	Transient
Comdr. W.T. HINES, USN	Aeronautics
Lt(jg) E.B. HITCHCOCK, E-V(G), USNR	Intelligence
Lt(jg) J.J. HOFER, MC, USNR	Special
Capt. H.D. HOFFMAN, USN	Head, Technical Branch
Lieut. W.C. HOLMES, Jr., D(L), USNR	Ordnance
Capt. L.V. HONSINGER, USN	Head, Service Branch
Lt(jg) C.A. HOPKINS, CEC, USNR	Head, Ships Section
Lt.Cdr. C.H. HOPE, D, USNR	Yards-Docks
Lt(jg) G.H. HUTZLER, D, USNR	Ordnance
1st Lt. A. HYATT, USMCR, (AVS)	Intelligence
	Aeronautics
Capt. W.R. IGNATIUS, USN	Ships
Capt. H.A. INGRAM, USN	Transient
Lt.Cdr. E.C. IVES, S(O6), USNR	Special
Lieut. J.M. JAYNE, A(I), USNR	Head, Aeronautics Section
Lt.Cdr. G.M. JONES, S(E4), USNR	Transient
Lieut. J. KAITZ, S(I), USNR	Intelligence
Lt(jg) A. KALITINSKY, S(A), USNR	Aeronautics
Ens. A.R. KASNICK, SC, USN	Transient
Lt(jg) F. KAY, USN	Ships
Lieut, E.R. KELLOGG	Transient
Lt.Cdr. G.E. KIDD, S(I), USNR	Intelligence
Lieut. P. KIND, Jr., A(L), USNR	Aeronautics
Lt(jg) S.C. KING, E(L), USNR	Transient
Lieut. L.A. KIRCHER, CEC, USNR	Yards-Docks
Lieut. N.C. KIRKHAM, S(O), USNR	Intelligence
Lieut. I.C. KITCHIN, S(I), USNR	Intelligence
Capt. KLEINSCHMIDT, USN	Ships
Lieut. E.P. KLEVEN, O-V(S), USNR	Ordnance
Lt(jg) H.V. KLINE, Jr., S(I), USNR	Aeronautics
Lieut. W.S. KOONTZ, S(O4), USNR	Transient
Lt(jg) W.P. KUSAK, D-V(S), USNR	Intelligence
Lt.Cdr. W.C. LANE, D-V(S), USNR	Transient
Lieut. R.E. LANKFORD, S(I), USNR	Intelligence
Lieut. A.H. LARSON, USN	Ordnance
Capt. W.C. LATROBE, USN	Transient
Comdr. W.R. LOUGHON, USN	Ships
Comdr. B.L. LAWRENCE, (A), USNR	Transient
Ens. R.E. LAWRENCE, S(O6), USNR	Ordnance
Lieut. H.B. LEE, III, S(A)T, USNR	Electronics
Lt.Cdr. G.B. LEVY, S(I), USNR	Operations
Lt(jg) K.E. LEWIS, D(L), USNR	Ordnance
Comdr. J.V. LICHTENTALER, (A), USNR	Aeronautics
Capt. L.B. LOEB, O-V(S), USNR	Ordnance
Lt.Cdr.J.K. LORD, (S), USNR	Operations
Lieut. W.L. LOVEJOY, S(A), USNR	Aeronautics
Lieut. J.E. LUEDERS, S(I), USNR	Transient
Lt.Cdr. E.L. LUKE, USN	Head, Electronics Section
Lieut. W.H. LYON, S(E), USNR	Ships
Lieut. J.G. LYONS, S(I), USNR	Intelligence
1st Lt. A.H. MAGRY, USMCR	Aeronautics
Lt(jg) F.L. MAINES, Jr., S(O6), USNR	Ordnance
Lt.Cdr. J.H. MARCHANT, A-V(S), USNR	Aeronautics
Comdr. M.L. MARSEN S(O4), USNR	Ordnance
Lt,Cdr. D.D. MATTHEWS, RNVR	Special
Lt.Col. J.B. MAULDIN, USMCR	Aeronautics
Lt(jg) S.G. MARCUS, MC, USN	Yards-Docks
Lt(jg) R.K. MAUTZ, D(E), USNR	Ordnance

SECRET

Roster of Officers (cont.)

Name	Mission Section
Lt(jg) J.F. MC CLELLAN, (D), USNR	Administrative
Capt. L. MC KEE, USN	Ships
Lieut. J.F. MC MAHON, S(I), USNR	Liaison
Lt.Cdr. H.E. MC NEELY, USN	Transient
Lieut. G.A. MEADE, (S), USNR	Transient
Ens. A.B. MEINEL, S(O4), USNR	Ordnance
Lt(jg) I.S. MENDELSON, (S), USNR	Intelligence
Lieut. T.C. MERKLE, Jr., S(O3), USNR	Ordnance
Lt(jg) P.E. MERRILL, (A), USNR	Air Documents
Lieut. T.L. MILLER, S(O), USNR	Ordnance
Lieut. B. MISHKIN, D(L), USNR	Operations
Lieut. J.L. MONAHAN, (PC), USNR	Operations
Capt. A.M. MORGAN, USN	Ships
Lieut. P. MORRIS, Jr., S(A), USNR	Aeronautics
Ens. G.M. MORRIS III, S(E), USNR	Ships
Lieut. D.F. MORSE, A-V(S), USNR	Intelligence
Lt(jg) M.A. MORTENSEN, Jr., C-V(S), USNR	Ordnance
Lt.Cdr. H.M. MOTT-SMITH, Jr., S(O1), USNR	Ordnance
Lieut. S.L. MOYER, USNR	Operations
Lieut. R.J. MULLEN, S(I), USNR	Intelligence
Capt. A.G. MUNN, USN	Ships
Capt. J.R. MILLES, USN	Transient
Comdr. C.H.S. MURPHY, USN	Transient
Lieut. V.C. MYLLER, (A), USNR	Transient
Lt.Cdr. L.H. MULLITT, USNR	Operations
Lieut. W.D. MYERS, S(A)T, USNR	Electronics
Lieut. T. NAGEL, S(O), USNR	Liaison
Lieut. K.M. NAGLER, A(L), USNR	Aeronautics
Lt(jg) R.E. NAVIN, S(E), USNR	Ships
Lieut. G.H. NEFF, S(O), USNR	Ordnance
Ens. R.W. NELSON, SC, USNR	Supply
Lieut. P. NOLAN, S(O1), USNR	Electronics
Lt(jg) T.G. O'LEARY, (S), USNR	Operations
Lieut. G.J. OLEJNICZ, E-V(G), USNR	Ordnance
Comdr. G.T. O'NEILL, S(I), USNR	Head, Intelligence Section
Lieut. G.W. O'NEIL, (S), USNR	Operations
Lt.Cdr. H.J. ORTH, Jr., (S), USNR	Ordnance
Lt(jg) B.D. OSYCZKA, D(L), USNR	Operations
Lt.Cdr. R.C. OTT, SC (S), USNR	Supply
Lt(jg) W.R. PABST, Jr., S(O4), USNR	Transient
Lieut. L.I. PARHILLA, D(L), USNR	Operations
Capt. E.N. PARKER, USN	Transient
Lieut. J.P. PARKER, USNR	Intelligence
Comdr. E.G. PETTYJOHN, S(E), USNR	Ships
Lieut. C.L. POOR, S(A), USNR	Aeronautics
Lt(jg) J.R. POTTER, E-V(S), USNR	Transient
Lt.Cdr. T.M. PRENTICE, CEC, V(S), USNR	Head, Yards-Docks
Lt(jg) N.H. PULLING, USNR	Transient
Lt.Cdr. B.R. QUENEAU, S(O1), USNR	Ordnance
Lt(jg) L.P. RAICHLE, D, USNR	Intelligence
Lieut. L.P. RALSTON, C(L), USNR	Intelligence
Lt.Cdr. D.W. RANDOLPH, S(A), USNR	Transient
Lieut. F.H. RATHBUN, S(E), USNR	Intelligence
Comdr, J.E. REHLER, CEC, USNR	Head, Yards-Docks
Lieut. C.F. REUSS, S(I), USNR	Intelligence
Lieut. E.E. RIBAS, D, USNR	Intelligence
Lt(jg) E.M. ROBERTS, Jr., S(O3), USNR	Ordnance
Lieut. G.M. ROBERTSON, E(L)T, USNR	Electronics

Roster of Officers (cont.)

Name	Mission Section
Capt. J.M. ROBINSON, USN	Head, Ordnance Section
Lieut. S.T. ROBINSON, A-V(S), USNR	Transient
Capt. [illegible].P. ROOF, USN	Ships
Lieut. C.V. ROOSEVELT, S(A), USNR	Aeronautics
Lt(jg) K.O. RUNGE, D(L), USNR	Intelligence
Lt.Cdr. L.A. RUPP, USN	Ships
Lieut. R.G. RUSSELL, S(03), USNR	Aeronautics
Lieut. C.M. SAFFER, Jr., O-V(S), USNR	Ordnance
Lt.Cdr. D.C. SANDY E(L), USNR	Operations
Capt. H.E. SAUNDERS, USN	Ships
Comdr. R.A. SAUER, S(O1), USNR	Ordnance
Lt.Cdr. E.A. SCANLAN, Jr., S(E), USNR	Ships
Commo. H.A. SCHADE, USN	Chief of Mission
Lieut. A. SCHILLING	Ships
Lt.Cdr. G.V. SCHLIESTETT, S(A), USNR	Aeronautics
Lt(jg) F.P. SCHMIDT, D(L), USNR	Ordnance
Capt. C.S. SEABRING, USN	Executive Officer
	Head, Ships Section
Comdr. D.A. SEILER, USN	Head, Aeronautics Section
Lieut. G.C. SEYBOLT, S(I), USNR	Administrative
Lieut. J.F. SHERIDAN, S(I), USNR	Intelligence
Ens. L. SHOLLENBERGER, USNR	Transient
Comdr. [illegible].B. SHORT, Jr.	Transient
Comdr. R.T. SIMPSON, DE, USNR	Ships
Comdr. F.K. SLASON, USN	Aeronautics
Lt(jg) G.E. SMETHURST, SC, USNR	Transient
Lieut. C.E. SMITH, III S(C), USNR	Operations
Lt.Cdr. L.F. SMITH, A(L), USNR	Aeronautics
Lt.Cdr. R.A. SMITH USN	Ships
Lt(jg) V.E. SMITH, (A)T, USNR	Electronics
Lieut. [illegible].T. SOUDER SC(S), USNR	Transient
Lieut. D.L. SOUTHEY, D-V(S), USNR	Yards-Docks
Lt.Cdr. [illegible]. SPINNEY, (A), USNR	Aeronautics
Comdr. F.G. SPRINGER USN	Ships
Lieut. J. P. STARKS, A(T), USNR	Intelligence
Lieut. H.C. STIFF, Jr., S(A), USNR	Aeronautics
Lt(jg) V.G. STINGLEY, S(E3)T, USNR	Aeronautics
Lt(jg) L.H. STRAUSS, E(L), USNR	Electronics
Comdr. W.E. SWEENEY, USN	Aeronautics
Capt. E.[illegible]. SYLVESTER, USN	Ships
Comdr. P. TALMEY, (S), USNR	Head, Ordnance Section
Lieut. H.A. TANNER, S(O), USNR	Electronics
Comdr. R.L. TAYLOR, USN	Ordnance
Lieut. C.W. THOMPSON, S(02), USNR	Ordnance
Lt(jg) P.M. THOMPSON, USNR	Transient
Lieut. J.P. THORNEL, S(03), USNR	Ordnance
Lieut. H.C. THORNBERRY, S(E3)T, USNR	Transient
Lieut. A.M. THUERMER, S(I), USNR	Intelligence
Lieut. B. TWEEDY, S(I), USNR	Intelligence
Lieut. E.H. UELLENDAHL, USNR	Intelligence
Lt(jg) H.C. VOGEL, D(L), USNR	Ordnance
Comdr. C.J. VOGT, S(E2), USNR	Ships
Comdr. A.VORIPAIEFF, S(E2), USNR	Operations
Lt(jg) W.L. WALCOTT, D(L), USNR	Operations
Lieut. W.J. WALKER, E(L), USNR	Transient
Lt(jg)R.[illegible]. WALLACE, Jr., S(C), USNR	Ordnance
Ens. T.M. WARE, A(L), USNR	Aeronautics

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Roster of Officers (cont.)

Name	Mission Section
Lieut. A.C. WARNER, (S), USNR	Intelligence
Lieut. T.S. WATSON, (DE), USNR	Intelligence
Lieut. R.E. WATSON S(O1), USNR	Ordnance
Lieut. G.I. WEBB, S(A)T, USNR	Aeronautics
Capt. L.D. WEBB, USN	Aeronautics
Lieut. T.M. WEIL, (S), USNR	Intelligence
Lieut. G.R. WERNISCH, CEC, USNR	Yards-Docks
Lt.Cdr. F.A. WIEDERSHEIM, III, CD, USNR	Intelligence
Lt(jg) P.W. WILKINSON, S(I), USNR	Intelligence
Lieut. J.C. WILLS, S(A), USNR	Aeronautics
Comdr. L. WOLFE, S(A), USNR	Aeronautics
Lieut. F.E. WOOD, S(A), USNR	Aeronautics
Lieut. F.S. WOODS, A, USNR	Aeronautics
Comdr. H.G. WOOLEY, RN	Special
Comdr. R.B. WRIGHT, S(E), USNR	Ships
Lieut. R.T. WRIGHT, S(O), USNR	Ordnance
Lt(jg) C.E. YOUNG, Jr., O-V(S), USNR	Intelligence
Lt(jg) K. YOUNG, S(E), USNR	Intelligence
Ens. J.P. YUKEVICH, D(L), USNR	Supply
Lt(jg) F.J. ZIOLEK, E-V(G), USNR	Intelligence

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Roster of Civilian Technicians

Name	Civilian Activity	Mission Section
Acker, H.L.	Sherwin-Williams Co.	Air
Allen, J.W.	BuAer	Air
Ansbacher, H.L.	BuPers	Special
Antonsen, A.K.	Baldwin Locomotive Works	Ships
Babbitt, C.A.	Western Pipe and Steel Co.	Ships
Bachman, A.E.	BuOrd	Ordnance
Barraja-Frauenfelder, J.	American Locomotive Co.	Ships
Batchelder, L.	Submarine Signal Co.	Electronics
Berggren, K.G.	Thomas A. Edison, Inc.	Ordnance
Biddle, J.F.	Carbon and Carbide Chem. Co.	Ships
Broad, R.	BuOrd	Ordnance
Bowker, J.E.	Westinghouse	Ships
Baldwell, F.W.	BuAer	Air
Campbell, K.	Wright Aeronautical Corp.	Air
Castner, J.B.	Dupont	Ordnance
Clapp, D.	OSRD	Special
Clough, K.E.	NOL	Ordnance
Coleman, H.C.	Westinghouse	Ships
Coles, J.S.	NDRC	Ordnance
Collins, L.J.	General Electric Co.	Ships
Crawford, R.M.	Carbon and Carbide Chem. Co.	Ships
Cronstedt, V.	United Aircraft Corp.	Air
Davidson, K.S.M.	Stevens Inst. of Technology	Air
Devlin, A.J.	Washington Navy Yard	Ordnance
Emmons, H.W.	Harvard University	Air
Ensinger, W.B.	BuOrd	Ordnance
Farrar, E.V.	Wright Aeronautical Corp.	Air
Fisher, L.C.	BuOrd	Ordnance
Fisher, S.P.	American Hard Rubber Co.	Ships
Fowler, D.C.	BuOrd	Ordnance
Foster, L.V.	Bausch and Lomb	Ordnance
Girouard, P.H.	BuOrd	Ordnance
Glassman, L.H.	BuAer	Air
Goeker, F.	Midvale Steel	Ordnance
Goldberg, M.	BuOrd	Ordnance
Gulliksen, H.O.	BuPers	Special
Hartmann, G.K.	BuOrd	Ordnance
Hawkinson, A.T.	Dupont	Ordnance
Heil, E.R.	Wright Aeronautical Corp.	Air
Hemenway, H.H.	Foster Wheeler Corp.	Ships
Herberger, C.F.	Pratt and Whitney	Air
Howell, J.H.	Carbon and Carbide Chem. Co.	Ships
Huebotter, H.A.	Allison Div., G.M.	Air
Jager, R.F.	Babcock and Wilcox Co.	Ships

Roster of Civilian Technicians (cont.)

Name	Civilian Activity	Mission Section
Kaiser, H.F.	NRL	Electronics
Keller, C.J.	General Electric Co.	Air
Kilpatrick, M.	BuOrd	Ordnance
Kirby, M.J.	BuOrd	Ordnance
Kleeh, R.S.	BuOrd	Ordnance
Knowlton, P.H.Jr.	General Electric Co.	Ships
Knowlton, F.R.	Bausch and Lomb	Ordnance
Krause, E.T.	NRL	Electronics
Kruse, J.R.	Combustion Engineering Co.	Ships
Lampton, G.T.	United Aircraft Corp.	Air
Lawrence, L.Jr.	Reaction Motors Inc.	Air
Lawson, W.E.	Dupont	Ordnance
Lewis, J.H.	BuOrd	Special
Lighton, L.E.	Electric Storage Battery Co.	Ships
Lindbergh, C.A.	United Aircraft Corp.	Air
Linville, T.M.	General Electric Co.	Ships
Lippert, J.Jr.	Grumman Aircraft	Air
Livingston, H.S.	OSRD	Ships
Lundquist, W.G.	Wright Aeronautical Corp.	Air
Lynn, C.	Westinghouse	Ships
Magdeburger, E.C.	War Department	Ships
Marquardt, F.R.	BuOrd	Ordnance
Mayo, W.H.	Carnegie-Illinois Steel Corp.	Ordnance
McCoy, D.O.	NRL	Ships
McVay, W.S.	Dupont	Ordnance
Meader, J.W.	BuAer	Air
Michel, R.	BuShips	Ships
Millikan, C.B.	Calif. Inst. of Technology	Air
Minter, C.C.	BuAer	Air
Murphy, G.	Fairbanks Morse and Co.	Ships
Northrup, D.L.	NOL	Ordnance
Olson, D.C.	NEES, Annapolis	Ships
Ponomareff, A.I.	Westinghouse	Ships
Pratt, P.W.	Pratt & Whitney	Air
Reichl, E.H.	Stanolind Oil & Gas Co.	Ships
Rettaliata, J.T.	Allis-Chalmers Co.	Ships
Roberts, F.H.	Carbon and Carbide Chem. Co.	Ships
Root, L.E.	Douglas Aircraft Co.	Air
Rosen, C.G.A.	Caterpillar Tractor Co.	Ships
Salzberg, B.	NRL	Electronics
Schreiner, N.G.	Lindo Air Products Co.	Ships
Sears, W.R.	Northrup Aircraft, Inc.	Air
Seegar, R.J.	BuOrd	Ordnance
Sellman, A.H.	NOL	Ordnance
Shoemaker, J.M.	United Aircraft	Air
Simons, R.F.	OSRD	Ordnance

Roster of Civilian Technicians (cont.)

Name	Civilian Activity	Mission Section
Smith, A.M.O.	Douglas Aircraft Co.	Air
Smith, C.H.	NRL	Guided Missiles
Smith, R.B.	Elliot Co.	Ships
Spaght, M.E.	Shell Oil Co.	Ships
Stout, E.G.	Consolidated Vultee Aircraft	Air
Street, D.L.	Bausch and Lomb	Ordnance
Stuelcken, C.A.	BuShips	Ships
Tilgner, C.Jr.	Grumman Aircraft	Air
Tolles, W.	ALSOS	Electronics
Tront, H.M.	NRL	Electronics
Tripp, R.W.	Farrand Optical Co.	Ordnance
Trotter, H.	Sylvania Electric Prod. Co.	Electronics
Tuttle, F.E.	Eastman Kodak Co.	Ordnance
Verville, A.B.	BuAer	Air
Vogt, P.R.	Chrysler	Air
Walbridge, J.B.	Westinghouse	Ships
Wayland, J.H.	Calif. Inst. of Technology	Ordnance
Wertheimer, A.	BuOrd	Ordnance
Williams, G.L.	Pratt & Whitney	Air

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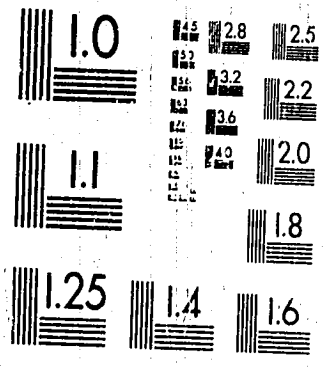

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