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.