

FLOATING AIRCRAFT MAINTENANCE FACILITY

(FAMF)

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HEADQUARTERS, US ARMY AVIATION SYSTEMS COMMAND

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FOREWORD

Since its publication in 1977, the steady demand for this publication has exhausted the supply of this work. This re-print not only re-establishes stock, but also offers a version re-edited for typographical and grammatical errors.

HOWARD K. BUTLER
St. Louis, Missouri
September 24, 1991

PREFACE

At almost any time during the recent American combat in Vietnam, a unique ship could be found riding at anchor just off Saigon. Known as the United States Naval Ship (USNS) Corpus Christi Bay, this ship kept station in the South China Sea primarily to maintain and repair aircraft of United States Army units based ashore. In about six-and-one half years, from 2 April 1966 to 31 October 1972, the Bay returned to operations almost 300,000 serviceable items, said items valued at more than \$200 million. In addition, the Bay contributed a wide range of invaluable wartime services, such as the repair of dump trucks, the fabrication of special aircraft searchlights, and the provision of medical and dental services to Americans and Vietnamese.

The Bay, however, was more than a floating repair facility; it was a representative of a concept. Behind the Bay, a specially-managed stateside military organization, which had wrought the Bay itself, labored to produce even more such ships, not only for more extensive aircraft maintenance and repair, but also for the maintenance and repair of electronic and mechanical items. Once afloat, these ships would constitute a strategic repair fleet reserve, capable of deploying off any point on the world's shorelines as fast as they could steam to it. The Bay thus served as a prototype for this fleet, and its performance would have a large bearing upon whether it would enjoy the company of any of its proposed sister ships.

It is this strategic aspect that forms the basis of this monograph. With it, the Bay is an idea, another statement of an American commitment to world-wide involvement. Without it, the Bay's accomplishments, impressive as they were, become only a mass of production numbers.

Seen in this imagery, the Bay failed. Its backers were never able to get a fleet of Bays to sea, or even to save the Bay itself from the maws of doubts. These doubts successfully associated with a wavering war policy and its sequential concomitants of time and money: when war interest waxed, opponents argued that the new fleet would take too long to deploy; when it slackened, they said that such a fleet would cost too much.

Nevertheless, the Bay concept skirted the edge of success, and the ship itself remained on duty all the while the debate continued and long afterwards, as well. This persistence, though primarily due to the Bay's powerful supporters, owed no small debt to the senior enlisted cadre of the Bay organization. These men, by acting as an element of continuity throughout uncertain times, enabled the Bay to stay on duty.

One of these senior cadre, Sergeant Major (SGM) James E. Kaylor, also played a vital part in this monograph. SGM Kaylor served from the

beginning, when he had a set of orders authorizing him to go anywhere in the country and to secure the cooperation of anyone in order to find, and plan for the operation of, a suitable maintenance vessel. SGM Kaylor stayed to the end, too, participating in the final organizational ceremony. In between times, the SGM, as befitted the often extra-legal, and therefore usually successful, activities of the Bay's organization, packed-ratted 72 boxes of records away from the destructive clutches of the records management people. It was these records, and the helpful comments of the SGM, that enabled the author to piece together much of this monograph.

The author would also like to express his gratitude to many others. These include several ex-members of the Bay's supporting organization, especially Chief Warrant Officer W-4 (CW-4) Robert R. Ethridge; those "old hands" here at the Headquarters who had retained, and permitted the author to use, their own "personal" Bay files; and, finally, Mrs. Marietta Vogler and the DRCDE Word Processing Center, who deserve special mention for their dedicated typing support. Any errors or misinterpretations pertain solely to the province of the writer.

St. Louis, Missouri
16 June 1976

HOWARD K. BUTLER

NOTE: Although the title of this DARCOM monograph is the Floating Aircraft Maintenance Facility (FAMF), the FAMF acronym had two other meanings. The first, as the Floating Army Maintenance Facility, was an officially inspired alteration designed both to describe any one of the proposed repair ships and to preserve organizational identity. Gradually, as the CCB remained the sole example of her species, the second usage appeared: the term FAMF came to apply to the CCB herself. Because of its treatment of all the repair ships, this monograph has taken the second usage into account and has avoided using the FAMF and the CCB as interchangeable terms when discussing proposed repair ships.

hkb

US ARMY AVIATION SYSTEMS COMMAND
 FLOATING AIRCRAFT MAINTENANCE FACILITY

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MATERIEL GROUP AND BATTALION COMMANDERS

Commanders - US Army Materiel Group No. 1 (Log Spt).

COL John F. Sullivan	20 May 66 to 28 Apr 67
COL Morgan C. Light	29 Apr 67 to 30 Nov 70
COL H. L. Baker	1 Dec 70 to 15 Jan 73

Commanders - 1st Transportation Battalion (ADM) (Sbn).

LTC John F. Sullivan	6 Oct 64 to Dec 65
LTC Harry O. Davis	16 Dec 65 to Jan 67
LTC John Bergner	Jan 67 to Mar 76
LTC John E. Cobb	Mar 67 to Mar 68
LTC H. L. Baker	15 Mar 68 to Mar 69
LTC Gaither C. Bray	28 Mar 69 to Apr 69
LTC Aaron L. Lilley, Jr.	17 Jun 69 to Jun 70
LTC Rudolph D. Descoteau	11 Jun 70 to 1 Jun 71
LTC William B. Crowell	1 Jun 71 to 22 Mar 72
LTC Leslie H. Weinstein	22 Mar 72 to 15 Jun 73
LTC Roger H. Boehnke	15 Jun 73 to 25 Jul 74
LTC James A. Greer	25 Jul 74 to 31 Mar 75

CHAPTER I

ORIGINS AND DEVELOPMENT

CONCEPT BACKGROUND

The Floating Aircraft Maintenance Facility (FAMF) story is, in many respects, a later version of a World War II tale. The parallels are numerous: the unavailability or deficiency of local combat aviation repair sources in the Pacific Ocean areas which led to the need for the ships; the use of a special management office to oversee the ship projects; the Army-Navy coordination problems on ship selection, conversion, and manning; and the unexpected delays in fielding both projects. These parallels suggest that the FAMF's proponents were aware of the World War II project.¹

The Army Aircraft Repair Ship Project, as the World War II endeavor was known, was a by-product of the Allies' "island-hopping" counteroffensive against the Japanese. This campaign involved frequent moves of hundreds of nautical miles, leaving adequate maintenance facilities far behind. These facilities had to be dismantled, shipped, and re-assembled at every new location. These procedures required

¹FAMF acknowledgement of research into the World War II use of floating aircraft maintenance facilities may be found in: Ltr, Colonel (COL) John F. Sullivan, U.S. Army Materiel Command, Project Manager, Flat-Top (AMC-PM FL), to Commanding Officer (CO), 1st Materiel Group (Logistic Support) (Log Spt) (Seaborne) (S), Corpus Christi, Texas, and Chief, FLAT-TOP Control Center, Corpus Christi, Texas, 7 Nov 66, Subj: Project Manager's Position-Command-Operational Control Channels, FAMF.

months, during which time the forward forces "hopped" again, once more leaving their repair facilities well to the rear.

Major General (MG) Oliver P. Echols, writing in November 1943, lamented the situation. He believed that this mobile use of semi-permanent land-based aircraft repair facilities was wasteful in manpower and money.² General Echols particularly deplored the use of skilled technical repair personnel in construction work.³

The use of floating facilities as a solution to this problem had occurred to the United States Army Air Forces (USAAF) as early as 1942. On 23 November 1942, COL L. P. Whitten, Transportation Corps (TC), requested fifteen 250-foot boats to be used as Aircraft Tender and Supply Ships.⁴ The USSAAF officially recognized COL Whitten's request, incorporating it into the Tables of Requirements submitted to the TC for Fiscal Year (FY) 1944.

²Ltr, MG Oliver P. Echols, HQ, AAF, to Commanding General (CG), Air Service Command, Fairfield, Ohio, 12 Nov 43, Subj: Floating Fourth Echelon Maintenance Facilities. MG Echols served a lengthy pre-war apprenticeship in the management of materiel problems at Patterson Field, Fairfield, Ohio. When war came in 1939, Lieutenant Colonel (LTC) Echols assumed the post of Assistant Chief, Materiel Division, at Wright Field. A year later, LTC Echols became Brigadier General (BG) Echols and division chief in Washington. In March 1942, BG Echols became the Commanding General of the Materiel Command. Whatever his title, MG Echols was the highest ranking wartime officer in materiel management. See Irving Brinton Holley, Jr., Buying Aircraft: Materiel Procurement for the Army Air Forces, Washington, D.C., 1964, pp. 464-65.

³Ibid.

⁴Ltr, COL L. P. Whitten, Director of Base Services (AFDBS) to Chief, TC, 23 Nov 42, Subj: AAF Floating Construction Requirements. COL Whitten's report superiors were, in ascending order, the Director of Military Requirements, the Chief of Air staff, and the Commanding General, Army Air Forces. All were in Washington, D. C.

Others had thoughts similar to COL Whitten's, including MG Walter H. Frank, CG, Air Service Command (ASC), and MG Robert G. Breene, CG, Army Service Forces in South Pacific Area. On 5 March 1943, General Frank, reflecting upon maintenance problems in the Southwest Pacific Theatre, asked that "consideration be given in obtaining and equipping floating depot repair boats and that similar equipment be installed on these boats as now furnished our Air Depot Groups."⁵ General Breene seconded this notion, remarking, in a later 22 February 1944 interview, that he early had believed that "...the ideal setup is to fix that General Depot, or that Air Depot, in such a way that it moves on the water and there's no loading up to do."⁶

⁵Ltr, MG Walter H. Frank, CG, ASC, to General Henry H. Arnold, CG, AAF, Subj: Overhaul of Engines in the Southwest Pacific.

⁶USAAF Historical Office, Air Technical Service Command, 14 Feb 45, A History of the Army Aircraft Repair Ship Project, November 1943 - September 1944, p. 8. The Air Service Command, which MG Frank commanded, and the Air Materiel Command, alluded to earlier, were equal members of the Air Forces Command. The Air Service Command was, generally speaking, responsible for the production of air items, while the Air Materiel Command concerned itself with procurement. In late 1944, in order to combine procurement and production, the Air Forces Command combined the Air Service and Air Materiel Commands into an Air Technical Service Command (ATSC). As its parents, the ATSC made its home at Wright Field (the Air Materiel Command having been returned there from Washington in March 1943).

Both the ATSC and its parents owed their existence to the virtual autonomy of the AAF. In 1942, the AAF came into being as one of three major War Department divisions - the other two divisions being the Army Ground Forces (AGF) and the Army Service Forces (ASF). The latter organization, which took charge of Army procurement policy, absorbed every one of the Technical Services save one - the Air Materiel Command. Though technically subservient to the ASF, the Air Materiel Command was able to have its own procurement say by means of a unique liaison arrangement through Under Secretary of War Robert P. Patterson.

CONCEPT DEVELOPMENT

Though none of these requests or suggestions achieved an immediate result, their effect was cumulative. As General Echols proceeded to note in his November 1943 letter, it was time for the War Department to allot floating repair equipment to the Army Air Forces. The General therefore concluded his letter with a request for "a suitable vessel." He then dispatched the letter to ASC Headquarters.⁷ Upon receipt of the HQ AAF communication, the ASC responded at once. Not only did it state that it was "...in complete accord..." with General Echols's proposal, but the Command also, after a brief but intensive consideration, outlined a fleet plan necessary to achieve the general's goal.

The fleet was to consist of two elements. One was six E.C. 2-S-01 10,800 ton Liberty vessels, which "...would provide adequate shop and storage space to support the operations of a modified Depot Repair Squadron and modified Depot Supply Squadron, [and] which should be capable of providing 4th Echelon services for approximately six combat groups." The Liberties would offer about 15,000 square feet of shop area and approximately 5,840 square feet of storage area. The estimated weight of the shop equipment would be 50 tons and weight of supplies would not exceed 50 tons. About 450 officers and men would man the shops; a crew of approximately 50 officers and men would operate the vessel.

The second fleet element would consist of approximately 18 auxiliary floating maintenance shops, manned by modified Service

⁷Echols, op cit.

Squadrons of 80 men each. The auxiliaries would "... conduct local repairs and operate in close support of combat groups. Repair crews and mobile repair units carried on these vessels could be transported to newly occupied bases in amphibian ducks also carried aboard the vessels....."⁸

Having complied with General Echols's request, the ASC quickly took two steps to determine those ships most suitable for concept implementation. First, the ASC secured the services of an expert advisor on technical affairs, one Major (MAJ) David P. Lent, Chief, Marine Section, Air Services Division of Materiel, Maintenance and Distribution. MAJ Lent obtained Navy plans and specifications for floating shops conversion for Army use as models. Second, the ASC dispatched a team to Norfolk to examine the USNS Luzon, a repair ship. This group examined the shop layouts and diesel engines of the Luzon, using them as models for the deck plans of the Army repair ships.⁹

General Echols accepted the ASC's program outline, despite its vast upward revision of his original modest request.¹⁰

The ASC, armed with the general's consent, pushed ahead full speed on ship acquisition. The ASC's chief vehicle in this endeavor was a Committee on Floating Maintenance and Supply Facilities. Established on

⁸1st Ind to Echols basic ltr, MG Delmar H. Dutton, DCG, ASC to CG, AAF, 1 Dec 43, Subj: Basic Ltr, from WD, Hq, AAF dated 12 Nov 43, Subj: "Floating Fourth Echelon Maintenance Facilities."

⁹ASC SO No. 311, 25 Nov 43, Subj: [Travel Orders].

¹⁰Memo, MG Oliver P. Echols, Air Corps/Air Staff (AC/AS) to Chief, Air Service (AS), 11 Dec 43, Subj: [Floating Fourth Echelon Maintenance Facilities].

25 January 1944, this committee acted as the ASC's focal point for all matters concerning the construction, outfitting, and manning of vessels to be used by the AAF as maintenance facility and supply boats.¹¹ Due primarily to the work of the Committee, the AAF was able to procure and field the repair ship facilities before the war's end.¹²

HQ, AAF provided the committee with both guidance and authority. Representing the HQ in this aid was MAJ Lent, who devoted almost all of his time to the Repair Ship Program. MAJ Lent both procured the ships requested by the ASC and arranged for the TC to convert them.¹³

PROCUREMENT

Liberties

With the authority granted, the plans made, and high-level support in hand, the Floating Repair Facility Project began 1944 smoothly. On 1 January 1944, Brigadier General (BG) E. S. Ferrin, Deputy Chief (DC), AS, sent a formal application to the Chief, TC, for six large vessels, the first repair ship increment. The TC forwarded the request to the Joint Military Transportation Committee (JMTC), which approved it. The JMTC then sent the request to the Joint Chiefs of Staff for final approval.

¹¹Memo, COL Thomas B. McDonald, Chief, Maintenance Control Section to Committee Members et al., 25 Jan 44, Subj: Committee on Floating Maintenance and Supply Facilities.

¹²USAAF Historical Office, op. cit., pp 22-23.

¹³ibid., p. 24.

At this point the project ran into formidable opposition, Vice Admiral Ernest J. King, Commander-in-Chief, US Fleet. To Admiral King, the whole repair ship concept was nothing less than an Army attempt to go to sea at the Navy's expense. The Admiral tried to kill the project, suggesting that the Joint Staff Planners and the Joint Logistics Committee should evaluate the repair ship proposal for merit.¹⁴

The AAF's response to Admiral King was partisan and vehement. Reporting on a January 1944 conference with the Navy on the repair ships, BG L. P. Whitten¹⁵ stated that if the Navy made detailed objections to AAF programs, then the AAF would make detailed objections to Navy programs. As General Whitten declared:

.... the Army had not interposed objections to the Navy's program for shore based establishments and Seabee Battalions for fleet aircraft, although to some of us the quantities appeared excessive.¹⁶

Faced with AAF determination, the Navy yielded on the basic ships issue. The Navy did not, however, cease all of its objections. The Navy's two principle points of debate were: one, the manner of conversion of the ships; and, two, the use of personnel on the ships.

On the first point, the Army contended that it should convert the vessels in the way and at the time it felt best. The Navy countered,

¹⁴ibid., pp. 14-15.

¹⁵The same L. P. Whitten who, as a colonel, made the 1942 floating repair facility proposals.

¹⁶Memo, BG Whitten, Chief, Air Services Division, to CG, AAF, 27 Jan 44, Subj: [Floating Fourth Echelon Maintenance Facilities].

insisting that any conversion should be made a part of the Maritime Commissions's over-all conversion program. If the Navy won this point, the Army believed, the repair ship project was dead, for the Navy would convert its own ships first. The Army, therefore, did not yield.

The second point, ships manning, was more open to compromise. The Army wished to operate the ships with civilian crews, the Navy with naval personnel. The solution, reached informally by General Arnold and Admiral King, called for Army Transport Service civilians to operate the ships, the Navy and the AAF to man the antiaircraft guns, and the Army to provide the work crews and control the vessels.¹⁷

The ASC thus gained all six of the Liberty repair ships that it wanted, losing only the minor point of shared antiaircraft gun control.

Auxiliaries

Procurement of the auxiliaries was also difficult. The problems, however, did not concern the basic question of whether or not to procure, but rather the size and manner of procurement. The procurement size, in the first case, decreased from 68 to 36 by informal agreement between BG John M. Franklin, Director of Water Transportation, TC, and General Whitten. The manner of procurement changed, too; the ASF objected to the construction of the additional ships for the AAF, and so the craft had to be drawn from existing sources. Fortunately, the TC had 212 boats under construction for use in Pacific supply routes.¹⁸ On 26 April 1944, MG Lucius D. Clay, Director

¹⁷USAAF Historical Office, op. cit., pp. 16-19.

¹⁸Ibid., pp. 20-21.

of Materiel, ASF, directed the Chief of Transportation to allocate 18 of these vessels to the AAF for auxiliaries.¹⁹ This directive's results were uneven: though the ASC did not get vessels expressly designed for maintenance, it did get vessels much quicker than it would have had the vessels undergone a complete construction cycle from design onwards. The TC, which was, as noted earlier, an ASF subordinate, got the responsibility for conversion of the ships for ASC use. A Special ASC Project Committee, headed by MG Clements McMullen, Chief of the Maintenance Division, ASC, administered the project to include liaison and supervision of procurement, construction, outfitting and manning.

SHIPS CONVERSION

Liberties

Contract conversion of the six Liberty ships began on 10 April 1944, when the TC received the first "bareboat" at the facilities of the Mobile Air Service Command, Mobile, Alabama. The ships, and their delivery dates, were:

<u>NAME OF SHIP</u>	<u>DATE DELIVERED</u>
<u>SS Daniel J. Garrett</u>	10 April 1944
<u>SS Rebecca Lukens</u>	13 April 1944
<u>SS Richard O'Brien</u>	30 April 1944
<u>SS Thomas LaValley</u>	15 May 1944
<u>SS Robert W. Bingham</u>	9 June 1944
<u>SS Nathaniel Scudder</u>	28 June 1944

Using the Luzon ship as a basis, the ASC expected to have the first

¹⁹Memo, MG Lucius D. Clay, Dir of Mat, ASF, to Chief of Trans, 26 Apr 44, Subj: Army Air Force Requirement for Vessels.

ship ready by mid-July 1944. Conversion delays, however, together with a few TC design changes, delayed the first ship delivery until 20 September 1944. After the deliveries were complete, the ships deployed to the Marianas and the Philippines, where they primarily assisted in B-29 accessory overhauls.²⁰

Auxiliaries

Contract construction of the auxiliaries proved even more difficult than the Liberty conversions. This was due to three factors: one, the need to incorporate TC design changes in the original ship plans; two, the failure to establish a priority for the procurement of electrical generators; and, three, the inability of the ASC to obtain Landing Craft, Tanks (LCT's) for use as auxiliaries. The first two obstacles merely meant delays; as for the third, the LCT's could not be obtained. It was 27 October 1944, therefore, before the first auxiliary craft was ready at its New Orleans conversion yard.

The 18 auxiliaries had required many changes. The Higgins Company, New Orleans, LA, had been building the boats to ASF well deck specifications. The ASC, with TC help, changed the design to a flush deck to create a two deck arrangement. Because the design changes had delayed the start of conversion until 23 May 1944, the ASC decided to let the Higgins Company install the AAF equipment, rather than wait for the TC to do it.

²⁰Ltr, COL J. T. Kingsley, Jr., Research and Development Division, USAF Air Materiel Command to CG, Air Materiel Command, Wright Field, Dayton, Ohio, 14 Jan 48, Subj: Aircraft Repair Units (Floating).

ARMAMENT AND EQUIPMENT

Armament

As the repair ships and their auxiliaries began to steam into action, they bristled with armaments. The Libertys carried 16 dual-purpose guns, consisting of one 5-inch gun, one 3-inch gun, two 40-mm. guns, and 12 20-mm guns. The auxiliaries had seven guns, including one 40-mm gun, two 20-mm guns, and two 50-caliber antiaircraft guns. Both ship types also carried de-gaussing equipment for magnetic mines and protective devices against chemical warfare.²¹

Equipment

Equipment proposals for the floating repair facilities closely followed the evolving mission concept of the facilities. In the beginning, this mission concept had called for dual-capable ships that could overhaul and repair both engine parts and engines. Equipment, therefore, had to be equal to that of any depot. Later, however, MG Clements McMullen, Chief, Maintenance Division, ASC, abandoned the engine overhaul requirement. This decision meant that the repair ships could be more simply, and therefore more readily, equipped. As one project officer noted, the repair program would save two years by accepting an already-designed vessel.²²

²¹USAAF Historical Office, op cit., pp. 32-38.

²²Memo, MAJ Miles Kraeman to COL O. F. Carlson, ACS Project Chairman, 23 Jun 44, Subj: "Comments on Suggestions Submitted By General Reed".

Nevertheless, the repair fleet had extensive equipment. The Libertys, for example, had these shops: machine; sheet metal; wood and pattern; blue print and blue print file; electrical; fabric; instrument repair, camera repair and cleaning; radio; battery repair; propeller; rubber repair; armament; oxygen manufacturing; plating; and, most special of all, an air-conditioned instrument and bombsight shop for delicate repairs. The auxiliary ships had large machine and sheet metal and wood shops. Both ship types also had paint and tools "rooms", and both carried large amounts of raw materials for shop fabrication.²³

In addition to standard depot equipment, the repair fleet carried four kinds of special vehicles - workboats, general purpose utility vehicles (JEEPS), DUKW 6 by 6 2 1/2 ton amphibian trucks (DUCKS), and helicopters. These vehicles ferried supplies and carried maintenance personnel to and from work sites. They served, in effect, as aerial, water, and land extensions of the floating facilities.

The most extraordinary of the special vehicles was the helicopter, a new item that was very difficult to obtain in 1944. All of the services wanted the craft; the repair project planned to use them for observation, location of downed airplanes, rescue work, and transport of supplies and personnel. To advertise its case, the ASC secured the services of Lieutenant Colonel (LTC) Leslie J. Cooper, a helicopter expert.

LTC Cooper's job was to obtain 15 R-4B Helicopters for the floating

²³Army Air Forces, HQ, ASC, Personnel and Training Division, Training Manual-Aircraft Repair and Maintenance Units (Floating), 3 Jul 44, pp. 133-167.

facilities.²⁴ On arriving in Washington, however, LTC Cooper found all 100 R-4B's already committed. His solution was to appeal for the production of 15 more, and he was successful.²⁵

Use of the helicopters was not unopposed. The ASC, for example, felt that flying aircraft from a ship might again give rise to Navy infringement fears. Consequently, on 23 May 1944, it stated that the AAF would place two helicopters on each repair ship, install a platform for their operations, and sail for the Pacific - all to be done without informing any non-AAF agency.²⁶

MANNING AND ORGANIZATION

Manning

Though a large number of men served in the floating facility project, their numbers were miniscule by World War II's gargantuan standards. The total maintenance strength was 3,222 men, consisting of 186 officers and 3,036 enlisted men. A breakdown of this strength follows:

Vessel Type	Strength Per Ship		Number of Ships	Personnel Totals
	Officer	Enlisted		
Army Aircraft Repair Ship*	22	362	6	2,304

²⁴ The R-4B was a small two-seater that could carry a 195-pound payload. The H-6, its replacement, was much larger and could carry more, but it had not entered mass production in late 1944.

²⁵ Memo, LTC Leslie J. Cooper, Personnel and Training Division, to COL O. F. Carlson, 13 Jul 44, Subj: Report of Trip to Washington, DC, 10, 11 and 12 July 1944.

²⁶ There was also internal opposition, particularly from BG Mervin E. Cross, Chief, Requirements Division. See USAAF Historical Office, op. cit., pp. 53-54.

Vessel Type	Strength Per Ship		Number of Ships	Personnel Totals
	Officer	Enlisted		
Army Aircraft Repair Ship (Auxiliary)**	3	48	18	918
				<u>3,222</u>

*Official designation of larger Liberty ships.

**Official designation of auxiliaries.

Operation of the ships lay in the hands of TC civilian crews, an ASC proposal agreed to by the TC.²⁷ The crews were small; the Libertys, for example, required only one officer and 70 men, all civilians who received a 100 percent pay premium.

The ASC had no difficulty in procuring the necessary numbers of project personnel; the problem was the quality of the personnel which the ASC got. Maintenance experts were scarce in wartime, and the project had no priorities. Consequently, the ASC had to draw most of its project personnel from its replacement Depots at Daniel Field, Georgia, and at Kelly Field, Texas.²⁸

With these personnel source limitations, the ASC had to rely heavily on training its own men. The Mobile Air Service Command, Mobile, Alabama, was responsible for this training, which consisted of a six-month course divided as follows: activation, organization and basic training - two months (at first one); unit training, consisting of one month each of technical, marine and advanced marine training; and one

²⁷Memo, MAJ D. D. Lent, Chief, Marine Section, ASC to COL D. W. Benner, AC/AS, Air Service Division, 25 Feb 44, Subj: Report to General Whitten of Progress of Floating Maintenance Units.

²⁸USAAF Historical Office, op. cit., p. 72.

month of shipboard training.²⁹

The strong impetus to deploy the ships greatly impacted on this training. The ASC reacted to this impetus in three ways. First, it built and utilized a shipboard repair facility at Bates Field, Alabama, on a three-shift per day basis, with students not subject to extra duties such as kitchen police. Second, it utilized all available outside schools, including civilian facilities. Third, it conducted most shipboard training during overseas movements of the repair facilities.³⁰

Organization

The scarcity of expert manpower had a direct effect on the organization of the project's personnel. Initially, as noted, the project was to consist of six Liberty ships and 36 auxiliaries. The manpower problems, however, cut the number of auxiliaries in half. The ASC did organize 18 elements for the remaining ships, but it disbanded them on 21 September 1944.³¹

The personnel expertise shortage also had several intangible effects upon the project's formal structure. These effects were due primarily to the limited facilities and the limited spaces aboard ship, limitations that forced the ASC to tailor an organization that could best employ the technical personnel on hand.

²⁹For a more complete description of courses, see: Army Air Forces, HQ, ASC, op. cit., pp. 40-96.

³⁰Ibid., pp. 76, 81, 96-103.

³¹(1) HQ, Warner-Robins ASC, GO No. 107, Para 1, 2 Jun 44. (2) HQ, Warner-Robins ASC, GO No. 160, 19 Sep 44.

The result was a structure that was relatively austere in administrative spaces. This structure had four divisions: Administrative, Tactical, Service, and Technical. The Administrative Division provided all of the administrative services for the entire structure; the other divisions, unlike their regular depot counterparts, had no administrative elements. As a consequence, these other divisions could devote full time to their respective work duties.

Formal organization of the first of these austere structures took place on 15 March 1944, when the Adjutant General's Department activated the First through the Sixth Floating Air Depots and assigned them to the ASC.³² On 17 March 1944, the ASC further assigned these units to the San Antonio ASC. Brookely Field, Alabama, served as the permanent station for the depots.³³

The new depot units received initial personnel allotments from Table of Distribution (T/D) 1-1052, 26 February 1944. This T/D served as a basis of operations until 27 June 1944, when a Table of Organization and Equipment (T/O&E) appeared for the units. The TD authorized 18 officers and 302 enlisted men for each depot, the T/O&E 22 and 362.³⁴ On 29 May 1944, the Adjutant General's Department redesignated the six depots as the First through the Sixth Aircraft Repair Units (Floating). The same order also redesignated the smaller units as the First through

³²War Directive (WD), Adjutant General's Department, AG 322 (4 Mar 44), 11 Mar 44, Subj: "Constitution and Activation of Certain Floating Air Depots."

³³ASC Order, 14 Mar 44, Subj: "Constitution and Activation of Certain Floating Air Depots."

³⁴USAAF Historical Office, op. cit., pp. 65-66.

the Thirty-sixth Aircraft Maintenance Units (Floating).³⁵

These smaller units had been known since their 18 May 1944 activation as Floating Repair Units.³⁶ They received a temporary table of organization with the activation order, directing them to organize in accordance with soon-to-be-published T/O&E 1-907. This temporary table gave them a strength of 3 officers and 41 enlisted men, figures later growing to 3 and 48, respectively.

OPERATIONS

Deployment of the repair fleet swiftly followed activation, organization, and training. On 26 September 1944, the first Repair Ship left Mobile, Alabama, for the Pacific. Once on station, this ship, and its sister ships which followed, fell under the orders of the local Theater Commanders. Tactically, this arrangement called for each Repair Ship to service several air combat groups and each auxiliary the airplanes in one group.

To execute its tactical role, the division had a conceived operational sequence. First, reparable parts would be brought to the ships, either at dockside or anchored off-shore. Second, the parts would then be put on-board by crane and deposited into a ship hatch. Third, the parts would go to the appropriate shop for repairs. All repairs would thereby be orderly and, most importantly for the tropics, made under cover. Moreover, if the ship did not have necessary repair parts in stock, it could

³⁵WD, Adjutant General's Department, AG 322 (23 May 44), 29 May 44, Subj: "Redesignation of Certain Army Air Force Units."

³⁶WD, Adjutant General's Department, AG 322 (11 May 44), 18 May 44, Subj: "Constitution and Activation of Certain Floating Repair Units."

probably fashion them in its shops. Finally, the entire task execution could be monitored by the elaborate test facilities installed on the repair ships.

The targets of the repair fleet's aircraft maintenance and repair service were those Air Combat Groups that did not have land-based depot support in their combat zones. This mission specifically limited the repair fleet to serve these combat groups only as a temporary maintenance depot. All other depot functions, especially supply, were to be the province of other area shipping.³⁷

The restrictions on repair fleet use did not long survive combat exigencies. Not only did the fleet repair, but it also carried an enormous amount of aircraft supplies. On 6 April 1945, for example, the 1st Aircraft Repair Unit (Floating) had 20 days of supplies on hand, including such items as screws, seals, clutch assemblies, washers, armatures, lamps, batteries, and pistons.³⁸ These items all could be immediately needed in remote areas, and so the ships kept a large amount available.

Actual shipboard repair operations, as mission execution, differed somewhat from the prescribed norms. The capabilities of the ships, and their availability, prompted extra usage. The 1st Aircraft Repair Unit (Floating), for example, not only repaired B-29 accessories on Tinian, but it also installed rocket equipment on Pursuit (P)-47's and assembled

³⁷Army Air Forces, HQ, ASC, op. cit., pp. 1-3.

³⁸HQ, 1st Aircraft Repair Unit (Floating), 6 Apr 74, Subj: Supply Level for Twenty (20) Days. These items did not include the ship's raw materials carried for parts manufacture, such as steel, brass and copper.

8 P-51's unloaded on Saipan by mistake.³⁹

Despite extra duties and moves, production from the repair ships was enormous. For the week ending 7 July 1945, for example, the 1st Aircraft Repair Unit (Floating) produced 3,228 items. Products were varied, including 150 air traffic map prints, 3 electrical relay switches, 15 bomb bay door motor assemblies, 26 Navy gas mask carrier pockets, 14 brake assemblies, and 4 inner tubes. Even this output did not meet demands; the 1st had a backlog of 6,242 items, including 3,000 aluminum marker tags, 2,000 card holders, 119 ball and socket assemblies, 3 oxygen regulators, and 4 navigation watches.⁴⁰

With the war's end, the repair fleet quickly phased out. By 1948, all six of the repair ships were stripped hulks awaiting scrapping. The ASC, by then part of the Air Materiel Command of the United States Air Force, believed that these ships, and their auxiliaries, had performed useful service, and that they might do well again at some future time. It consequently began a study of the ships, with particular emphasis upon their use as initial war depot facilities for current aircraft.⁴¹ Nothing, however, came from this study, and the floating repair ship idea remained largely dormant until the Vietnam War period.

The World War II repair project left Army aviation two legacies.

³⁹Ltr, COL J. T. Kingsley, Jr., op. cit.

⁴⁰Ltr, COL Harry C. Mission, Chief, Programs and Projects Div, HQ USAF, to COL J. T. Kingsley, 27 Jan 48, Subj: Requirements for Aircraft Repair Ships, with 1 Incl, Weekly Production Report, 1st Aircraft Repair Unit (Floating), For Week Ending 7 July 1945.

⁴¹Ltr, COL P. E. Rueston, Ch, Logistics Planning Group, Air Materiel Command to CG, Air Materiel Command, Wright Field, Dayton, Ohio, 4 Dec 47, Subj: Requirements for Aircraft Repair Ships.

First, it laid the design groundwork for those who might attempt later and similar ventures. This groundwork included management policy standards, plans, conversion procedures, concepts of operation, and combat deployments. Second, and more importantly, the project set two precedents. It not only showed that strong inter- and intra-service opposition could be overcome, but it also revealed that a cooperative military-civilian venture could provide effective aircraft maintenance support to the combat theaters.

CONCEPT REVIVAL

The first person to revive successfully the idea of a floating Army repair facility was Mr. Charles W. "Pat" Flaherty, a civilian working for the US Army Transportation Supply and Maintenance Command (TSMC), St. Louis, Missouri. In August 1955, Mr. Flaherty submitted a Department of the Army (DA) beneficial suggestion for the T.C. Mr. Flaherty's suggestion called for the TC to develop a Floating Field Maintenance Shop, utilizing the FS-751 John D. Page. The FS-751 was a converted Landing Ship, Tank (LST). The TC had originally fitted out the craft as a floating island for its aerial tramway system; in August 1955, the craft was awaiting turn-in as excess at the Charleston Army Depot (CHAD), Charleston, South Carolina.

Mr. Flaherty's suggestion gained strong support from BG Richard E. Meyer, Special Assistant for Air, Office, Chief of Transportation (OCOFT). At General Meyer's prompting, the TC conducted a 1956-1957 study aboard the FS-751. Captain (CPT) Rudolph Descouteau, TC, was in charge of the study. An anticipated project, however, did not follow.

Mr. Flaherty did not abandon his idea, despite its rejection. In October 1962, while on temporary duty (TDY) with the United States Army

Supply and Maintenance Command (SMC), he presented the notion of an aircraft maintenance ship to COL Joe Tyner, then Chief of SMC's Maintenance Operations Division. Mr. Flaherty believed that his idea could help solve aircraft maintenance problems currently encountered in the Republic of Vietnam (RVN). COL Tyner agreed, and he permitted Mr. Flaherty to present his idea to the United States Army Materiel Command (AMC).⁴²

At this point the uniqueness of Mr. Flaherty's contribution falls into question. The TC Marine Field Office in Norfolk, Virginia, stated that, due to [Mr. Flaherty's] effort, the US Army Transportation and Materiel Command, St. Louis, Missouri, was requested to accomplish a study on the subject.⁴³ The study mentioned, "Army Aircraft Maintenance, Supply and Combat Transport Support Vessel," led directly to the FAMF.⁴⁴

Other sources insist that the real originator of the FAMF was Lieutenant Colonel (LTC) John F. Sullivan, who served from 1960 to 1962 as Director of Production Control at the US Army Aeronautical Depot Maintenance Center (ARADMAC), Corpus Christi, Texas. A story in a 1964 issue of the Philadelphia Inquirer, for example, states that LTC Sullivan first conceived the FAMF during his 1960-1962 ARADMAC tour. LTC Sullivan, the story noted, got his idea from watching the operations of the Army's

⁴²Memorandum for Record (MFR), Project Flat Top Marine Action Officer, US Army Marine Field Office, Norfolk, Virginia, 22 Dec 62, Subj: History of Floating Aeronautical Maintenance Facility.

⁴³Ibid.

⁴⁴Staff Study, HQ TMC, Directorate of Maintenance Operations, 7 Nov 62, Subj: Army Aircraft Maintenance, Supply and Combat Transport Vessel.

current "fire brigade" units. These units were heavily dependent upon helicopters and light planes for transportation, supply, and fire cover. Frequently, however, the units operated in areas in which there were either no aircraft repair facilities, or in which such facilities were in ruins. These units, LTC Sullivan believed, needed a mobile repair facility, and a small carrier converted for repairs, he concluded, was the best answer. LTC Sullivan then spent two years selling his idea to the ARADMAC, to the AMC, and finally to the Department of Defense.⁴⁵

The solution to this apparent FAMF authorship dilemma is in itself another dilemma. While Mr. Flaherty and LTC Sullivan both advanced the FAMF idea, LTC Sullivan, at least, was aware of many precedents. Writing later of the search for an appropriate ship, LTC Sullivan noted that:

....the archives of the senior service schools were scoured for action reports, published articles and student papers on the subject. Of particular value were the volumes on the use of seaplanes [sic] tenders, a Bureau of Aeronautics paper of 1958 on the use of an Essex-class carrier as a maintenance facility, the reports of the Air Corps floating shops of 1943-1945 (five C-2 cargo ships), and research undertaken by the Army Transportation Corps as early as 1952 studying the use of LSTS [sic] in this role.⁴⁶

⁴⁵[Ed], "Army Getting a 'Navy' to Help Its Air Force," Philadelphia Inquirer, 4 Oct 64.

⁴⁶COL John F. Sullivan, "The Army's Floating Aircraft Maintenance Facility," US Naval Institute Proceedings, Vol XCII, No. 7 (July 66) p. 148.

As LTC Sullivan concluded in a 1963 memorandum:

The Army has been working on the floating repair ship proposal for 10 years. The Air Force and the Navy both employed repair craft for aviation during World War II....The concept therefore is not entirely new....⁴⁷

We may also assume that Mr. Flaherty, an employee of the TC, was aware of the TC's continuing work on the floating repair facilities subject. He might also have been cognizant, as LTC Sullivan was, of current Navy and United States Marine Corps (USMC) use of such facilities. The Navy employed seatenders as repair facilities for its POLARIS submarines,⁴⁸ and the Marines already had a FAMF, the USNS Thetis Bay, which they had converted from an aircraft carrier for use as a floating aircraft maintenance facility.⁴⁹

The massive amount of FAMF source material, and the current operation of a FAMF-like craft by an American armed service, suggest that originality is not of significance in the FAMF story. On the one hand, originality would be difficult, if not impossible, to prove; on the other, none of the Army's floating maintenance facility ideas germinated between 1945

⁴⁷MFR, LTC John F. Sullivan, Director, Production Control, ARADMAC, 13 May 63, Subj: Review of Navy Objectives Expressed or Inferred to Date and the Proposed Army Reply.

⁴⁸Ltr, COL John F. Sullivan, Project Manager (PM), FLAT-TOP, to Commanding Officer (CO), 1st Materiel Group (Log Spt) (Sbn), US Naval Air Station (NAS), Corpus Christi, Texas, and Chief, FLAT-TOP Control Center, NAS, Corpus Christi, Texas, 25 Nov 66, Subj: Project Manager's Position-Permanent Party-Rear Detachment - FAMF.

⁴⁹Staff Study, HQ TMC, op. cit., Annex C.

1962. Discarding originality, then, because of the many originators, development becomes the paramount criteria.

Using this criteria, LTC Sullivan easily holds sway. It was he who was the chief mover of the FAMF idea, spending much of the 1960-1962 period in this endeavor. LTC Sullivan's fight for his baby flat-top led him from the ARADMAC to Washington, where he undoubtedly had strong influence on LTG Frank S. Besson, CG, AMC. This influence led General Besson to move LTC Sullivan to HQ AMC from the ARADMAC. Once at Headquarters, LTC Sullivan joined General Besson's staff as planner and executor of Operation FLAT-TOP. On 9 November 1962, General Besson formalized LTC Sullivan's position, assigning him FLAT-TOP Project Officer.⁵⁰

LTC Sullivan had risen from the ranks. Born 17 July 1922, LTC Sullivan joined the US Army in 1940. After two years in enlisted status, LTC Sullivan attended the Officer Candidate School (OCS) of the Quartermaster Corps (QMC). Upon commissioning in 1942, LTC Sullivan reported for duty at Headquarters, Fifth Air Force, Air Technical Service Command, then located in Australia in the Southwest Pacific.

In October 1942, LTC Sullivan made an abrupt change in his career, transferring to the Ordnance Corps (OC). This change brought him into the New Guinea operations, in which he served as a maintenance officer for several Service Squadrons and for an Air Depot Group. After the war's end, LTC Sullivan continued his air interest, attending USAF Pilot Training, Connally Air Force Base (AFB), Texas, in 1950; the Spartan School of

⁵⁰Msg, CG ARMC to CG, SMC, 28 Dec 72, Subj: [Assignment of LTC Sullivan as FAMF Project Officer].

Aeronautics, Tulsa, Oklahoma, in 1952; and the Army Aviation School, Fort Rucker, Alabama, in 1956. Between school assignments, LTC Sullivan served as the first military head of the HQ, OC's Aviation Supply Branch, 1950-1952; as Chief of the Aviation Materiel Branch, Office, Chief of Ordnance, US Army, Europe (USAREUR), 1952-1956; and as Commanding Officer (CO), 8th Transportation Helicopter Company, XVIII Airborne Corps, 1956-1958. LTC Sullivan then received attachment to the US Army Attache Office, US Embassy, Ottawa, Canada, 1958-1960. While on embassy attachment, LTC Sullivan trained in production management with the DeHavilland Aircraft Company, Limited, of Toronto, Canada.⁵¹

CONCEPT EVALUATION

Ship Evaluations

Formal AMC investigation of FLAT-TOP began before LTC Sullivan's appointment. In August 1962, the AMC directed the TMC to explore the possibility of using the USS Antietam as a floating shop to provide helicopter maintenance in the Far East. The Antietam was an ESSEX Class, CVS-36 aircraft carrier, located at Pensacola, Florida. The Navy was most agreeable, informally supporting the Antietam as an adequate ship for the assignment and evincing support for the FAMF concept. By 9 October 1962, however, investigators had discarded the Antietam as too

⁵¹Biographical Sketch, AMC Information Office, c. 1962, Subj: Colonel John F. Sullivan, USA.

large and too costly to operate and had recommended, instead, consideration of the USS Thetis Bay, a jeep carrier.⁵²

The AMC accepted this proposal, assigning its monitorship to the AMC Iroquois Project Manager (IR PM) on 31 October 1962. The CG, AMC, then proceeded to implement the proposal, appointing LTC Sullivan as project officer on 9 November 1962 and ordering the TMC to conduct a floating maintenance facility study. The CG also undertook an inspection tour of Southeast Asia (SEA) maintenance facilities.⁵³ By 7 November 1962, the TMC study was complete, and it fully buttressed both LTC Sullivan's ship proposal, General Besson's SEA trip findings, and the Antietam-Thetis Bay arguments.⁵⁴

Armed with a ship rationale, the AMC moved to ship selection. On 28 November 1962, General Besson transmitted the Army's requirement to the Chief, Naval Operations (CNO) and requested the Navy to establish a working group to assist the Army in ship surveys and other FAMF requirements. The Navy complied, and from December 1962 to April 1963 a service-mixed officer team compared CVE's, BOGUE, and COMMENCEMENT BAY class vessels. Ships compared included the USS Commencement Bay, CVHE-105; the USS San Jacinto, CVL-30; the USS Philippine Sea, CVS-47; the USS Bunker Hill, CVS-17; the USS Franklin, CVS-13; the USS Langley, CVL-27; a T-3 tanker hull; two ARVE-A's; and two LST's. The team also evaluated shop layouts

⁵²Project FLAT-TOP Historical Report, FY 1965, pp. 1-2.

⁵³COL John F. Sullivan, "The Army's Floating Maintenance Facility", op. cit., p. 148.

⁵⁴Staff Study, HQ TMC, Directorate of Maintenance Operations, op. cit.

on the USS Okinawa, LPH-3; the USS Oriskany, CVA-34; and two fleet repair ships on C-2 hulls.

On 12 February 1963, the AMC brought the Deputy Chief of Staff for Logistics (DCSLOG) into the FAMF action by a briefing. The DCSLOG, impressed, recommended the conduct of detailed FAMF studies and established the support of a contingency plan as the principal FAMF requirement. On 13 February 1963, the Vice Chief of Staff, Army (VCSA), added further requirements, directing the DCSLOG to evaluate the FAMF concept fully, to include cost effectiveness studies, and to submit its results by 31 March 1963. The VCSA also directed the US Army Combat Developments Command (CDC) to make a parallel study evaluation.

The evaluation studies were most helpful to the evaluation team. The team had already rejected the BOGUE Class as too large; the studies excluded the COMMENCEMENT BAY CLASS for the same reason. The team therefore concentrated its attention on CVE's.

Shipboard Maintenance Shop Manning

The shift to CVE's brought two more study sources to the aid of the floating facility evaluation team. The first was the Transportation Agency (TA), an element of CDC's Fort Lee, Virginia, sub-command, the Combat Service Support Group (CSSG). On 19 March 1963, the DCSLOG requested the TA to assist in the development of data on the 4th echelon aircraft maintenance company in support of concept evaluations and comparisons. In April 1963, the American Power Jet (APJ) Company of Ridgefield, New Jersey, also joined the team; its purpose was the conduct

of a cost effectiveness study on a mobile, high productivity, aircraft maintenance factor analysis.⁵⁵

The entry of the TA and the APJ into the lists not only further symbolized the growing delineation of what the FAMF was to be, but also an interest in what type of organization was to man it and in what manner this organization would function. This interest dated from 25 January 1963, when COL Crowley of the IR PM outlined a Table of Distribution (TD) for the FAMF:

1. The present TD for ARADMAC military maintenance unit, 69-7989-01 will be the cadre for the floating maintenance element. The ARADMAC unit is authorized approximately 190 officers and men. About 110 are now on board.

2. The floating unit has a proposed strength of 420 officers and men. This includes medics, Ordinance [sic], Signal and Transportation Corps personnel and will operate much like a separate battalion....

5. The problem of manning the 400 man plus TD unit could be resolved by:

- a. Activating a TD(Civilian) unit, 4th echelon in Alaska utilizing the equipment now in the theater.

- b. Reduce the CONUS 4th echelon shops by the number of civilian spaces required.

⁵⁵Project FLAT-TOP Historical Report, op. cit., pp. 3-4.

c. Move the 4th echelon TOE Company in Alaska to ARADMAC and inactivate it. Use the personnel and/or the spaces to man the increased TD for the floating facility.

d. Move tools and equipment from the CONUS shops to equip the floating unit with personal maintenance tools.⁵⁶

COL Crowley's memorandum essentially outlined the future FAMF manpower and organization course. The men would not, however, serve on an aircraft carrier, as the colonel had presumed.

Ship Selection

By late 1963, the ship upon which COL Crowley's men would serve had become smaller. FLAT-TOP had, as its name suggested, indicated the conversion of an aircraft carrier, and the ODCSLOG had indeed noted, on 25 January 1963, its approval of such a ship, but for Europe, not SEA. Army-Navy evaluation results, however, showed, as 1963 passed, that a carrier would be too expensive to operate and convert, and that such a conversion would take too much time. The USS Franklin, for example, would cost about \$12 million to convert and at least \$5.6 million per year just to support its 1,035-man Navy crew. The CG, AMC, accordingly, on 6 September 1963, once again redirected the FAMF study towards a smaller vessel, a seaplane tender.⁵⁷

⁵⁶(1) MFR, [COL Crowley], AMCPM-IR, to COL Schultz, 25 Jan 63, Subj: Personnel for Floating Maintenance Facility. (2) USA Mat Gp No. 1 (Log Spt), Historical Summary, Floating Aircraft Maintenance Facility [1 July 1970-15 January 1973], Annex A, Chronology, [p.3].

⁵⁷MFR, LTC John F. Sullivan, 23 Jan 64, Subj: [FAMF Background]. (2) FLAT-TOP Chronology, op. cit., pp. [5-6].

The object of AMC concern was the USS Albemarle, AV-5, anchored with the James River Reserve Fleet in Virginia. Personnel from Mr. Flaherty's office in Norfolk had inspected the ship and believed it could successfully be converted.⁵⁸ Acting on their behalf, MG Edward W. Sawyer, Chief of Transportation, requested, on 16 October 1963, the Maritime Administration (MARAD) to loan the Albemarle to the Army for 90 days.⁵⁹ On 21 October 1963, the MARAD affirmatively replied, but it noted that the Army would be responsible for all costs incidental to the loan.⁶⁰

Anticipating MARAD approval, the AMC took three preliminary Albemarle evaluation actions. These actions consisted of: one, CG, AMC, approval, on 15 October 1963, of an Albemarle feasibility study; two, the dispatch, on 23 October 1963, of a request to the CO, Military Sea Transportation Service (MSTS), to tow the Ablemarle to the CHAD; and, three, authorization to the CHAD of \$85,000 for an AV-5 feasibility study. Upon MSTS ship delivery, the AMC formed a study group at the CHAD, consisting of 38 members from various AMC commands, under the chairmanship of Mr. Flaherty, Chief, Norfolk Army Marine Field Office.

⁵⁸FONECON, Howard K. Butler with CW4 Robert R. Etheridge, Fort Lewis, Washington, 27 Jul 73.

⁵⁹Ltr, MG Edward W. Sawyer, Chief of Transportation to the Honorable Donald W. Alexander, Maritime Administrator, 16 Oct 63, Subj: [Albermarle Loan].

⁶⁰Ltr, Mr. J. W. Gulick, Deputy Maritime Administrator, to MG Edward W. Sawyer, Chief of Transportation 21 Oct 63, [same Subj].

Ship Deployment Studies

While the Norfolk group evaluated the Albemarle, the ARADMAC began two complementary tasks. The first, completed in November 1963, consisted of the development of military personnel and training requirements and the initiation of actions to establish a local FAMF cadre.⁶¹ The second task, conducted 2-16 December 1963, was a visit to the Pacific Area to evaluate stationing of the FAMF in Vietnam.

The second task was a major effort. Sponsored by MAJ Richard Dismukes, the AMC LNO, Republic of Vietnam (RVN), the task involved the dispatch of a briefing and concept evaluation solicitation team to six commands. These six, and the key personnel contacted within them, were: the United States Army, Pacific (USARPAC), COLs S. C. McAdams and M. O. Mobery; the Joint Operations Evaluation Group, Vietnam (JOEG-V), MG R. H. York; the Military Assistance Command, Vietnam (MACV), BG D. M. Oden; the Army Concept Team in Vietnam (ACTIV), LTC H. N. Weggland; the Army Support Group, Vietnam (ARSGV), BG J. W. Stilwell and COLs John L. Klingenhagen and R. Evers; and the HQ, Support Activity, Saigon (HSAS) - Navy, Commander (CDR) R. E. Begley.

The true purpose of the team was, of course, to establish the need for a FAMF in SEA waters. Thus, despite finding that the Army aircraft "up" rate was higher in the USARPAC than in any other major Army command, the

⁶¹Project FLAT-TOP Historical Report, op. cit., p. 5.

team concluded that a FAMF was necessary. This was due to four eventualities that could change the presently favorable situation: one, rotation of experienced maintenance staff and supply personnel; two, a planned use of currently adequate CH-21 SHAWNEE stocks to support dispositions in other areas; three, the on-going wider deployment of UH-1B HUEYS; and four, a shortage of Continental United States (CONUS) overhaul finances. A FAMF, the report argued, could help all but the last eventuality, because of the FAMF's ability to deploy close to the operations zone, because of the FAMF's "back-stop" position on the CONUS supply pipeline, and because of the projected concentration of depot-like facilities on the FAMF.

The report did, however, concede FAMF disadvantages. It therefore set forth both the advantages and disadvantages of FAMF to the ARSGV; the USARPAC; the Commander in Chief, Pacific (CINCPAC) Fleet; the CINCPAC; the DA; and the Department of the Navy (DN). This comparison became the most important feature of the report, as its entries were to be used again and again by FAMF proponents.

The report's findings distilled to eight major entries, of which four were advantages and four disadvantages. The advantages were: one, the existence of a mobile, depot-like facility close to the operations area; two, the use of such a depot by the local commander without charge to his support capacities and ceilings; three, the reduction of several costs by lessening the pipeline travel time of reparable; and, four, the addition of one more ship to the Navy's fleet. The disadvantages were: one, the increase of a security problem both for the local command and

the Navy; two, the creation of judicial problems, both in the Geneva Convention implications of ship operation and in the discipline of a civilian crew; three, the great initial cost of conversion and project establishment; and, four, the presentation of extra cross-service concerns, especially in the question of command control, the operation of the ship, the control of the crew, and the re-assertion of an Army precedent in ship-manning.⁶²

The completion of the SEA report coincided with the conclusion of the FAMF evaluation study at Charleston. The former provided justification for FAMF's use in Vietnam, the latter the use of the Albemarle as a FAMF. The cost was to be only \$4.383 million - \$1 million, activation; \$2.383 million, conversion; and \$1 million, outfitting. MSTs operating costs were to be about \$5,795 per day. On 3 January 1964 and 6 January 1964, respectively, the CG, Supply and Maintenance Command (SMC), and the CG, AMC, received FAMF seaplane tender concept decision briefings. Both approved the concept. Accordingly, on 7 January 1964, LTC Sullivan instructed the APJ to make a cost effectiveness study of the concept.⁶³

⁶²Ltr, LTC John F. Sullivan, Project Office, Operation Flat-top, to CG, AMC, 20 Dec 63, Subj: Preliminary Evaluation of Stationing Operations Flat-top in Pacific Area, with inclosed trip report. The report also discussed almost every conceivable minor question, such as gold flow implications, the legality of using machine guns with a civilian crew on-board, and the stationing of the ship in other-than Vietnamese waters, as at Subic Bay, Philippine Islands.

⁶³USA Mat Gp No. 1 (Log Spt), Historical Summary, 1 Jul 70 - 15 Jan 73, Annex A, op. cit., p. [7].

CONCEPT IMPLEMENTATION

Introduction

The real effect of AMC's FAMF concept approval was to move LTC Sullivan's FAMF promotional campaign upwards to higher Army echelons.⁶⁴ The CG thus set the FAMF Project on a course that, with minor tacks, it would follow for the course of the American involvement in the Vietnam War. The course's outlines consisted of an organizational direction and policy set forth by a special FAMF element; an established contractual relationship with the APJ Company; a selected initial ship, the USNS Albemarle; and a management policy oriented towards the eventual deployment of a world-wide fleet of FAMF's. With the project thus underway, LTC Sullivan could devote himself to more detailed tasks.

FAMF Promotion

The most pressing of these tasks was persuading the DA to rule favorably on the project. There were two keys to obtaining DA approval: one, a draft of support from extra-HQ AMC sources; and, two, a good FAMF presentation to the DA. General Besson sought to obtain both keys with further data.

On 6 January 1964, the General initiated his data augmentation effort. He directed FLAT-TOP to: one, prepare a FAMF Cost Effectiveness Study;

⁶⁴MFR, Mr. Charles W. Flaherty, Action Officer, Project FLAT-TOP, Charleston Army Depot (CHAD), North Charleston, South Carolina, 15 Jan 64, Subj: Floating Aeronautical Maintenance Facility.

and, two, to submit it, together with the FLAT-TOP III Concept Proposal, to DA on or about 20 January 1964. LTC Sullivan immediately responded, recommending, on the basis of previous good work and experience, the use of the APJ to conduct the study. General Besson agreed.

The next day, 7 January 1964, LTC Sullivan outlined the study's requirements to the APJ. The APJ was: one, to make its previous cost appraisal more inclusive, and, two, to compare the floating facility to a dollar-expressed capability. Since these requirements involved no more than an elaboration of the APJ's previous study-presentation, the APJ readily announced, on 13 January 1964, that it could easily meet the 20 January 1964 presentation deadline. The formal study printing, however, would be late.⁶⁵

LTC Sullivan's next step was to acquire Commander in Chief, Pacific (CINCPAC), support. On 7-8 January 1964, preliminary contact with CINCPAC, indicated strong FAMF opposition. In response, LTC Sullivan asked for, and obtained, CG, AMC intercession with USARPAC.⁶⁶ The USARPAC, however, did not submit a favorable response in time for the critical DCSLOG briefing.

⁶⁵MFR, LTC John F. Sullivan, Operation Flat-Top Project Officer, 13 Jan 64, Subj: Flat-Top III Cost Effectiveness Study.

⁶⁶MFR, LTC John F. Sullivan, Operation Flat-Top Project officer, 13 Jan 64, Subj: Telecon with CINCPAC-7-8 January 1964.

LTC Sullivan therefore concentrated his attention on the APJ input. The APJ made good progress and, on 20 January 1964, General Besson was pleased sufficiently to approve the FAMF concept formally and to recommend it to the DCSLOG.⁶⁷ In his recommendation, dated 23 January 1964, General Besson focused his attention on the uses of an aircraft carrier-transport in brewing Vietnam conflict. General Besson believed that such a transport could alleviate fourth echelon and limited depot maintenance problems for helicopters in Southeast Asia.⁶⁸

The DCSLOG briefing took place on the same day. LTC Sullivan and Dr. Chernowitz presented the briefing. Chief attendees included LTG R. W. Colglazier, DCSLOG; LTG F. S. Besson, CG, AMC; and BG Ferdinand J. Chesarek, of DCSLOG. The DCSLOG was impressed; a second briefing on FAMF operating costs followed the next day, 24 January 1964.

Despite General Colglazier's apparent assent, LTC Sullivan was worried. Writing on 31 January 1964, he declared that:

Selling General Besson's pet - the Flat-Top - must now be turned to the psycho-sell. I'm running into the little thinkers, the outer world people who have been somewhere in the 1st two decades other than near to the realities of world conflict. It's alarming but for real. I have to put more

⁶⁷Ltr, LTC John F. Sullivan, Project Officer, to MAJ Richard L. Dismukes, USAMC Liaison Officer (LNO), ACTIV, 30 Jan 64, Subj: [FAMF concept Approval].

⁶⁸Ltr, LTG F. S. Besson, Jr., CG AMC, to DCSLOG, 23 Jan 64, Subj: Floating Maintenance Facility for Army Aircraft.

Madison Avenue into this thing before I can be assured that we will gain the objective....

The problem, the rain, the mud, the heat, the humidity, the steam, the inadequacies of the mobile overhaul shops; the whole of our 1942 outlook with its shortcomings must be conveyed to the uninitiated in some form those important few who now do not readily understand and appreciate will recognize.⁶⁹

Shortly thereafter, on 4 February 1964, the appearance of powerful support did much to allay the Colonel's fears. At that time, the Honorable Mendel Rivers, Democrat, South Carolina, called MG Jean E. Engler, the DCG, AMC and expressed a strong vested interest in the FAMF. Representative (Rep) Rivers, ranking member, House Armed Services Appropriation Committee, had heard of the proposed Albemarle conversion, and he wanted the \$5 million that it would cost invested in the Charleston shipyards, then in a minor economic decline.⁷⁰

DA Project Approval

To insure an adequately favorable CSA response, LTC Sullivan needed

⁶⁹Ltr, LTC John F. Sullivan, Project Officer, to MAJ Richard Dismukes, AMC LO, ACTIV, 31 Jan 64, Subj: [Selling the Flat-Top].

⁷⁰MFT, LTC John F. Sullivan, Project Officer, 4 Feb 64, Subj: Query from Congressman Rivers (South Carolina). Note: The Rivers support might not have been unexpected. Though LTC Sullivan denied to General Engler that he had instigated the Rivers query, subsequent close Sullivan-Rivers collaboration is illustrative.

the support of the Deputy Chief of Staff for Personnel (DCSPER), the DCSLOG, the Deputy Chief of Staff for Operations (DCSOPS), and the Comptroller of the Army (COA). The DCSPER quickly responded, concurring on the FAMF establishment on 7 February 1964.⁷¹ The DCSLOG, the DCSOPS, and the COA, however, asked for more evidence to support the FAMF.

The DCSLOG's FAMF position was characteristic of the three non-supporters - favorable, but questioning. In February 1964, the DCSLOG drafted a proposed position to the DA on the FAMF, together with a draft letter of approval to the CG AMC, and a staff evaluation of the proposal. The evaluation stressed the FAMF's reliability and flexibility, not its economy, in these five main points:

1. General Concept of Operations.

From the viewpoint of tactical mobility, the proposed facility provides an off-shore industrial-type maintenance capability which the Army currently does not possess....

2. Facility Utilization in Peacetime.

The contingency support mission for this facility must remain prime and cannot be diluted by engaging the facility in relatively permanent off-shore operations during peacetime. However, it must be recognized that work done in this facility will not require doing elsewhere, regardless of whether it is to be used in contingency plans or peacetime. Therefore, contractual work in CONUS can be reduced....

⁷¹DF, COL C. C. Jeffries, Chief, Distribution Division, DCSPER-DD, to DCSLOG, 7 Feb 64, Subj: CG USAMC's Proposal for a US Army Aeronautical Maintenance Facility (Floating).

3. Costs.

The initial cost to convert the USS ALBEMARLE is estimated at \$6.8 million. Subsequent annual ship operating cost is estimated at \$2.5 million....

Current P-2300 [sic] funds should supply the first year's operating costs for the maintenance work to be performed on the facility.

4. Personnel Requirements.

The 380 personnel spaces required can be obtained by phasing out the ARADMAC Base Maintenance Unit (Training), Corpus Christi, Texas, and the 539th TC Company (Aircraft Heavy Maintenance), New Cumberland, Maryland (total of 358 spaces).

5. Cost Avoidance and Savings.

There is a potential savings when the vessel is used off-shore since approximately 12% of the high dollar value reparables that are returned for overhaul can be returned to the user by the facility because of an increased test and diagnostic capability. In addition, there is a savings potential of manhour skills since the personnel aboard will be solely occupied in their maintenance capability, whereas on-shore approximately 15% of personnel time is occupied in accomplishing administrative tasks.⁷²

⁷² Draft ltr, DSCLOG (LOG/B3) [to CSA], [5 Feb 64], Subj: Floating Maintenance Facility for Army Aircraft, with 2 inclosures, DA Staff Evaluation of AMC's Proposal To Establish A Floating Maintenance Facility For Army Aircraft, and Draft ltr, DCSLOG to CG AMC, [5 Feb 64], Floating Maintenance Facility for Army Aircraft.

On 6 February 1964, LTC Joseph P. Cribbins, DCSLOG, further clarified the DCSLOG's views for presentation to the CSA. LTC Cribbin's memorandum stressed the prime contingency requirement, the new capability, and the increased tactical mobility. LTC Cribbins did not emphasize costs, except to note that there would be a potential 12 percent cost savings during operations. The sources of this 12 percent were the vessel's test and diagnostic capabilities, which would return high dollar value reparable items to the user.⁷³ The DCSLOG thus had a positive view on which position should be taken—that of non-concurrence until more financial data results could be derived from the APJ's cost-effectiveness study.⁷⁴

The COA wanted even more data. Specifically, it noted the AMC's:

- a. Failure to consider all feasible courses of action....
- b. Failure to provide an adequate evaluation of the limitations of the floating maintenance facility.
- c. Failure to consider all essential cost factors in the cost effectiveness study.

The COA presented especially telling objections to points a and c. It faulted the AMC for not comparing the costs of a FAMF with other possibilities, such as semimobile ground units and cross-service arrangements. It also charged the AMC with failing to consider all the costs of operating a floating maintenance facility.

⁷³MFR, LTC Joseph P. Cribbins, Assistant to ADCSLOG(MR) for Tactical Mobility, 6 Feb 64, Subj: Floating Aircraft Maintenance Facility.

⁷⁴Draft Ltr, DCSLOG to DCSOPS, 13 Feb 64, Subj: CG USAMC's Proposal for a US Army Aeronautical Maintenance Facility (Floating).

Costs omitted, according to the COA, included individual training, ARADMAC overhead, special manufacturing tools, capital equipment, and other special tools. The study also excluded special costs necessary to support "back-up" personnel for the ship, and it possibly offered incorrect figures on ship maintenance and dry docking costs.

The COA therefore withheld its concurrence until the deficiencies received correction.⁷⁵

The DCSOPS's objections were just as sweeping as the COA's. The DCSOPS questioned vessel vulnerability, cost evaluation, peacetime mission use, source of maintenance personnel, and impact on overall Army aviation maintenance. The DCSOPS's peacetime question was of special note, for it did not consider the use of a training battalion to enable the vessel to deploy rapidly. Without such a battalion, the ship, as the DCSOPS suggested, would have to maintain a full operating crew.⁷⁶

Coordinating AMC reaction to the reservations, the DCSLOG was able to persuade the COA and the DCSOP's to resolve their objections in a compromise summary sheet. This sheet specifically restricted the Albemarle missionto support contingency plans. It will provide an off-shore, industrial-type aircraft maintenance element, immediately responsive to emergency requirements, which will be able to diagnose and test, and repair and return to the user, high cost reparable components, engines and

⁷⁵DF, BG R. N. Tyson, Director of Management, OCA, to DCSLOG, [6?] Feb 64, same Subj.

⁷⁶DF, DCSLOG to DCSOPS, 13 Feb 64, same Subj.

aircraft that would normally require return to CONUS....

The ALBEMARLE is not intended to replace the Heavy Maintenance and Supply (HM&S) Company as the basic aircraft field maintenance element in the Army. Depending upon the nature and location of an emergency, the ALBEMARLE may precede an HM&S Company; it may remain at the site of the emergency and supplement an HM&S Company; or it may take the place of an HM&S Company throughout an emergency.⁷⁷

Thus, despite the notion that the FAMF could carry equipment not currently airmobile, the DCSLOG definitely considered the craft only as an emergency maintenance means. This consideration, while appeasing short-range opposition, served to harm later FAMF management attempts to build and station permanently a fleet of FAMF's.

On 10 March 1964, LTC Cribbins, the DCSLOG FAMF action officer, briefed LTG Colglazier, the DCSLOG, on the results of the coordinated summary position. General Colglazier expressed his approval of both the results and the FAMF project.⁷⁸ The general then ordered the DCSLOG action officer to begin preparation of a FAMF Program Change Proposal (PCP) for the Secretary of the Army (SA).⁷⁹ The general also notified the CG, AMC,

⁷⁷Draft Summary Sheet, LTC Joseph P. Cribbins, LOG/A (MR), 4 Mar 64, Subj: Floating Maintenance Facility for Army Aircraft.

⁷⁸[MFR], LTC John F. Sullivan, 10 Mar [64], Subj: [FAMF Program Progress].

⁷⁹[MFR], LTC John F. Sullivan, 11 Mar [64], [same Subj.].

of CSA approval of the establishment of a maintenance facility on board the Albemarle.⁸⁰

To LTC Sullivan, DCSLOG approval was an anticipated necessity. The colonel believed that time was a critical factor in FAMF deployment; every second lost in DA paperwork lessened the chance of a FAMF slipping out to sea. LTC Sullivan, therefore, tried to speed his project by acting first, then worrying about the authority. This pose led him to obtain support from AMC sub-commands for an officially non-existent project, to discuss manpower requirements for an office on no organizational chart, and, most importantly, to solicit funds for the continuation of his yet unauthorized project. The DCSLOG's approval, therefore, was corroborative, and none too soon.

FUNDING

BP2300

LTC Sullivan could now concentrate on his biggest sub-task, fund raising. This task, he soon discovered, would be as difficult as obtaining approval had been. The source of this difficulty was the lateness of the fiscal year.

On 4 March 1964, LTC Sullivan met with Mr. Albert York, HQ AMC's Budget Program (BP) 2300 man,⁸¹ to discuss funding the PCP. Mr. York informed

⁸⁰Ltr, LTG, R. W. Colglazier, Jr., Acting Vice Chief of Staff, Army, to CG, AMC, 16 Mar 64, Subj: Floating Maintenance Facility for Army Aircraft.

⁸¹[MFR], [LTC John F. Sullivan], 4 Mar 64, Subj: [FAMF Funding]. BP 2300 funds covered the Depot Maintenance and Support Activities of the Operations and Maintenance, Army (OMA) appropriations.

LTC Sullivan it was too late for DA FY 1964 BP2300 funds. Moreover, Mr. York continued, even more months might pass if the Department of Defense (DOD) had to supply the funds. Apparently the \$6.75 million LTC Sullivan needed -- an increase from the earlier \$4.383 million estimate -- was not in the Army's coffers.

LTC Sullivan's funding problems had a very direct impact upon his intention of getting the FAMF to sea in a year. The Navy Bureau of Ships (BuShips), which was to convert and reactivate the Albemarle, had to execute a shipyard loading plan every fiscal year quarter. The inclusion of a ship into one of these plans required a minimal 90 days notice. Without firm requirements and initial DA funding, the BuShips could not schedule the Albemarle in any loading plan. Furthermore, all BuShips action programming, as well as the tooling, training, manning, and equipping programs of other elements, might need to be redone in the event of a long delay.⁸²

PEMA

LTC Sullivan would not get his money for five months. On 6 March 1964, faced with a lack of BP2300 funds, he chose to switch to try to obtain money from a supposedly more ready category, Procurement of Equipment and Missiles, Army (PEMA). BP4700, "Other Support Equipment", was apparently the appropriate PEMA listing. BP4700 covered procurement, manufacturing, re-manufacturing and conversion of floating and other types of heavy equipment.⁸³

⁸²Ibid.

⁸³MFR, [LTC John F. Sullivan], 6 Mar 64, [same Subj].

The AMC's reaction to Sullivan's move was favorable, but restrained. LTG Bunker supported the PEMA initiative, stressing adoption of the position that the FAMF would be a PEMA item -- major equipment, combat support -- and that modification altered its original employment application.⁸⁴ LTG Besson, however, suggested that any PEMA changes await the conclusion of DA actions leading to FAMF establishment approval. General Besson did want to disturb such actions, which resulted in the desired approval on 16 March 1964.⁸⁵

After FAMF establishment approval, LTC Sullivan again launched his PEMA campaign. The first step was to make the AMC's intentions in the matter known to the DCSLOG. On 1 April 1964, LTC Sullivan met at the DCSLOG for this purpose.

LTC Sullivan's presentation to the DCSLOG emphasized the facility of a PEMA approach. The PCP, he argued, could easily be abandoned, for total FAMF FY expenditures would not exceed \$10 million, and the FAMF would not affect either total Army strength or any major Army unit. Only a reprogramming action, he concluded, would be necessary for the use of PEMA funds. The DCSLOG agreed; on 2 April 1964, it stated that only such an action, called a R-2 was necessary.⁸⁶

⁸⁴MFR, [LTC John F. Sullivan], 9 Mar 64, [same Subj].

⁸⁵MFR, [LTC John F. Sullivan], Ibid.

⁸⁶(1) MFR, [LTC John F. Sullivan], 1-3 Apr 64, [same Subj]. (2) USA Mat Gp No. 1 (Log Spt), Historical Summary, 1 July 1970 - 15 January 73, Annex A, op. cit., [p. 11].

R-2 Versus PCP, PEMA

The AMC continued its close support of LTC Sullivan. On 6 April 1964, BG Henry K. Benson, Jr., Director of Materiel Readiness, HQ, AMC, sent a letter to the DCSLOG requesting the change to PEMA funding at a FY 1964 cost of \$7,683,270. Included with the General's letter was the R-2 funds request form, called Program Change - Forces, Investment, Operations.⁸⁷ The Office of the Deputy Chief of Staff for Logistics (ODCSLOG) received the request favorably, passing it to the Director of Materiel acquisition, ODCSLOG, for expeditious action.⁸⁸

By May 1964, the PEMA R-2 proposal was at the Office of the Secretary of the Army (OSA). Here it began to encounter delays. The OSA (Installations and Logistics) (I&L) and the OSA (Finance and Accounting) (F&A) both required briefings and more data before proposal acceptance.⁸⁹ The OSA then dispatched the R-2 to the Office of the Secretary of Defense (OSD), Comptroller. The Comptroller rejected the proposal for want of an attached PCP for force change. As he noted, the R-2:

....involves a change in force structure not now
contained in the approved Five-Year Force

⁸⁷Ltr, BG Henry K. Benson, Jr., Director of Materiel Readiness, HQ, AMC, to the DCSLOG, 6 Apr 64, Subj: Revision of Procurement Schedules, Annex III, Part 3 of the Materiel Program, with 1 inclosure, Program Change-Forces, Investment, Operations, [6 Apr 64].

⁸⁸Memo, COL William J. Parson, Acting AD CSLOG (MR), to Director of Materiel Acquisition, 7 Apr 64, Subj: Floating Maintenance Facility for Army Aircraft.

⁸⁹MFR, [LTC John F. Sullivan], 5-7 May 64, Subj: [PEMA Proposal].

Structure and Financial Program. A program change proposal covering the change in force structure for the Department of the Navy MSTS should be submitted for consideration by [sic] the Secretary of Defense. Following the approval of the PCP and consistent therewith, a reprogramming action may then be submitted.⁹⁰

The OSD also added a further qualifier. It decided that the provisions of Public Law (PL) 149 - 86th Congress, section 412, were applicable. This PL required Congressional approval of certain OSD decisions--in this instance, FAMF funding approval. The Armed Services and Appropriations Committees of both the Senate and the House of Representatives would be the approving bodies.⁹¹

LTC Sullivan, and the AMC, had perforce to follow the OSD's decision. LTC Sullivan was furious; he blamed the OSD's action on a Navy failure to inform its Comptroller of the FAMF proposal. Consequently, he reasoned, the resulting Navy Comptroller ignorance of the FAMF proposal prompted the OSD to return the proposal for a coordinating PCP. To the colonel, it appeared that

....the Army's requirement had never been taken seriously and acted on accordingly. It may be that the result stems from a reluctance on the

⁹⁰Memo, MR. J. S. Hoover, Deputy Assistant Secretary of Defense (DASD), Comptroller (Budget), for the Assistant Secretary of the Army (PM), 11 Jun 64, Subj: [PEMA Reprogramming Action].

⁹¹MFR, [LTC John F. Sullivan], 9-15 Jun 64, [same Subj], p. [1].

part of at least a few strategically placed members of the Navy staff to further the project - for reasons parochial....[The Navy used the] expression "exercises in futility"....a number of times to make note of the exhaustive Study the Army had undertaken.... and the part the DCNO had been required to play....⁹²

By 10 July 1964, the necessary program change had the DCSLOG's signature.⁹³ On 13 July 1964, the DCSLOG revised the PCP PEMA figure from \$9.1 million to \$12.5 million; the addition included air conditioning and tooling during conversion. The proposal then went to the OSA on 14 July 1964; the OSA forwarded it to the OSD on the same day. After receiving assurance from the Chief of Naval Operations (CNO) that the Navy had no objections to the use of the Albemarle,⁹⁴ Mr. Cyrus Vance, Deputy Secretary of Defense, signed the PCP on 3 August 1964. The PCP provided \$11.5 million for the project, of which \$2.5 million was for capital equipment and \$9.0 million was for ship conversion, to include \$1.5 million for air conditioning. The PCP also approved 156 extra MSTS spaces, MSTS overtime, and 380 Army spaces. The FAMF was to be fully operational by 1 January 1966, with a capability of supporting 335 aircraft

⁹²Ibid, p. 3.

⁹³ Summary Sheet, MG L. J. Lincoln, Acting DCSLOG, 10 Jul 64, Subj: PCP on Floating Maintenance Facility for Army Aircraft.

⁹⁴ USA Mat Gp No. 1 (Log Spt), Historical Summary, 1 Jul 1970 - 15 Jan 1973, op. cit., [pp. 13-14].

in Vietnam with efficient fourth echelon and limited fifth echelon maintenance.⁹⁵

Congressional approval of the PCP required another month. Senate consultation was not necessary; the key hurdle was the House Appropriations Subcommittee. LTC Sullivan prepared a list of FAMF facts for DCSLOG use before the committee.⁹⁶ On 4 September 1964, the House committee held the FAMF hearing, approving the concept. Based on the House decision, the CSA gave the FAMF project official approval to begin ship conversion on 17 September 1964.⁹⁷

ORGANIZATION AND MANNING

FAMF PM

The creation of a special office to monitor this \$11.5 million in conversion funds did not long antedate conversion approval. On 9 June 1964, MG Bunker, now DCG, AMC, directed the establishment of a Project Manager Office (PMO) at HQ, AMC, to direct the FAMF Project.⁹⁸ Called the FLAT-TOP PMO, after the original carrier conversion scheme, the office received formal standing on 25 June 1964, with an effective date of 17 June 1964.⁹⁹ LTC

⁹⁵ Program Change - Secretary of Defense Decision/Guidance, 3 Aug 64, Subj: Floating Aircraft Maintenance Facility, signed Mr. Cyrus Vance, Deputy Secretary of Defense.

⁹⁶ Notes for DCSLOG, [LTC John F. Sullivan], 1 Sep 64, Subj: [FAMF Facts].

⁹⁷ Project FLAT-TOP Historical Report, FY 1965, op. cit., p. 19.

⁹⁸ MFR. [LTC John F. Sullivan], 9-15 Jun 64, op. cit., [p. 1].

⁹⁹ (1) AMC GO No. 51, 25 Jun 64. (2) Msg, CG, AMC to Commodity Cmdrs, 17 Jun 64, Subj: Project Manager FLAT-TOP.

Sullivan was the first project manager (PM).

First on the new PM's agenda was the establishment of an organization. As usual, LTC Sullivan had anticipated this establishment by several months. On 20 January 1964, he took the first step towards adumbrating his organization with a publication known as A Proposal: Concept of Operation, Organization, Manning, Equipping and Cost Data. As its title indicated, the proposal drew the intended organization around floating facilities. In the words of LTC Sullivan: "[the] organization structure is built around the equipment and manpower requirements of a representative contingency plan mission."

LTC Sullivan's concept was thorough. Beginning with a mission of accomplishing Class "C" aviation maintenance on a FAMF, he continued with descriptions of functions, a concept of operation, an organization for employment, schemes of maintenance, supply, and equipment, and requirements in personnel, training, and command and control. The resulting organization, "assigned to and supported by a parent unit in CONUS," would shorten inventory pipelines, increase available support by means of its sophisticated facilities, and offer the Army a means of responding to emergency situations at remote global points with early tactical aviation maintenance support.¹⁰⁰

The concept of operation publication led to two management standards documents. These two were: a Project Manager Master Plan (PM₂P),

¹⁰⁰LTC John F. Sullivan, Project Officer, US Army Aeronautical Maintenance Facility: A Proposal: Concept of Operation, Organization, Manning, Equipping and Cost Data, HQ, AMC, Wash., D.C., pp. 1-46, passim. The essence of class "C" aviation maintenance was a capacity to inspect, adjust, repair, overhaul and salvage aircraft components and to fabricate scarce parts and tools. LTC Sullivan also wanted the FAMFs to offer production maintenance equipment.

published on 14 October 1964, and a Project Manager Organization and Management Manual, published on 1 December 1964. The former publication contained the organization, mission, and functions of the FLAT-TOP Office as well as its command relationships with other organizations. The latter publication specifically defined the PM's responsibilities.¹⁰¹

The two standards documents produced, in turn, a policy guidance effort called the Implementation Plan, Project FLAT-TOP. Published on 1 December 1964, this plan's purpose was the provision of guidance to the many agencies involved in the FAMF Project. It therefore tried to be inclusive, covering manpower and equipment work assignments, documentation, consumables, and ship support.¹⁰²

The implementation plan, and the other operations publications, served until mid-1965 as an informal project charter. On 9 August 1965, General F. S. Besson, Jr., signed the Project Charter, Project FLAT-TOP. This charter designated LTC Sullivan as the Project FLAT-TOP PM and as the Commander, 1st Transportation Corps Battalion (Aircraft Maintenance Depot) (Seaborne) (1st TC Bn) (AMD) (S). As the PM, LTC Sullivan was responsible for the definition, development, and acquisition of the FAMF. This responsibility entailed maintenance of several technical and organizational relationships.

LTC Sullivan's PMO was at Headquarters, AMC, in Building T-7, Gravelley

¹⁰¹ (1) LTC John F. Sullivan, Project Officer, Project Manager Master Plan, Project FLAT-TOP, HQ, AMC, Wash., D.C., 14 Oct 64. (2) LTC John F. Sullivan, Project Officer, Organization and Management Manual, Project FLAT-TOP, HQ, AMC, Wash., D.C., 1 Dec 64.

¹⁰² LTC John F. Sullivan, Project Officer, Implementation Plan, Project FLAT-TOP, HQ, AMC, Washington, D.C., 1 Dec 64.

Point, Virginia. The PMO had two field offices, as well. The most important was one at Corpus Christi, Texas; it bore the designation FLAT-TOP Control Center. The ARADMAC provided administrative and logistical support to this office. The other office lay at Charleston, South Carolina. The Charleston Army Depot (CHAD) supplied administrative and logistical support to the Charleston office. The Charleston office was temporary; it existed only for the FAMF conversion. Other such temporary offices could also arise in the event of further FAMF conversions or constructions.¹⁰³

FAMF Structure and Personnel

The FAMF's organization functioned about a concept design of response to the new aviation logistics needs of the Army. The primary factor in this design was an adequate response capability in any part of the globe. Consequently, the FAMF organization had to be flexible.

The FLAT-TOP PM achieved this flexibility by the use of a composite team. One team, 1st TC Bn (AMD) (S), consisting of 380 officers and men, operated on-board the FAMF. The other team, initially known as the 2nd Transportation Corps Battalion (TC Bn), consisted of 360 officers and men who engaged in AMC depot-level maintenance training activities. The purpose of the latter team was to replace the former at yearly intervals. The 2nd TC Bn also provided personnel for technical assistance, maintenance escort teams for overseas aircraft shipments, and maintenance modification teams for modifying aircraft to the latest configurations.

¹⁰³Project FLAT-TOP Charter, signed General F. S. Besson, Jr., 9 Aug 65.

Control of the two battalions fell into the hands of the FLAT-TOP Control Center. This center, which was at Corpus Christi, Texas, had a complement of 22 officers and men. It directed and administered the activities of the operating and support battalions, serving as the AMC's military operations command and control unit. Part of this center was due to go to sea if more than one battalion became engaged in a single action.¹⁰⁴

Overseeing the Corpus Christi and seaborne activities was the PMO and the Corpus Christi Field Office. The AMC established the staffing pattern for both on 18 November 1973.¹⁰⁵

According to this pattern, the PMO office had an office staff of one military--a Deputy PM, LTC, and six civilians - 1 Assistant for Programs, a General Schedule (GS)-13; 1 Assistant for Materiel, a GS-13; 1 Assistant for Operations, a GS-11; 1 Financial Management Analyst, a GS-11; 1 Secretary Steno, a GS-6; and 1 Clerk-Typist, a GS-5. The PM himself was on the 1st Bn TC TDA. The PMO completed staffing by November 1964. On August 1965, however, the PMO added one space, a Technical Assistant GS-14, and replaced the Financial Management Analyst GS-11 with a Supply Specialist GS-11. The AMC paid the office salaries and other support costs with O&MA Funds.

The Corpus Christi Field Office, established in December 1964, had a staff of 1 military -- a LTC Office Chief -- and 16 civilians, ranging in grade from GS-3 to GS-14. Project funds supported the staff, and the 1st TC Bn lent 7 enlisted men (EM's). The ARADMAC provided administrative and

¹⁰⁴Project FLAT-TOP Historical Report, FY 1965, op. cit., pp. 8-9.

¹⁰⁵AMC GO NO. 73, 18 Nov 63.

logistic support to the office.¹⁰⁶

The Charleston Field Office, established in September 1964, had no official staff of its own. The 1st TC Bn furnished, on loan, a Chief Warrant Officer (CWO) as Office Chief. Four enlisted men, also from the 1st TC Bn, assisted him. The CHAD loaned 4 civilians to the office, and it also provided the office with complete administrative and logistic support, to include the reception of Army-related visitors to the Charleston Naval Shipyard.¹⁰⁷

FAMF Organizational, Control and Logistic Support Complexes

With the addition of the Charleston Office, the FAMF organizational structure was complete. A chart of this organization, as of 1 January 1965, follows:

PROJECT FLAT-TOP
Organization Chart

Technical Advisor

Project Manager
Deputy Project Manager

Administrative
Office

Assistant for
Operations

Assistant for
Programs

Assistant for
Materiel Management

Charleston Navy
Yard Field Office

Corpus Christi
Field Office

Assistants for
Engineering and
Equipment

Operations,
Planning, and
Training Division

Materiel
Management
Division

¹⁰⁶ Ltr, COL Robert W. May, Cofs, SMC, to CO, ARADMAC, 22 Jan 65,
Subj: 1st Tc Battalion (Aircraft Maintenance Depot) (Seaborne).

¹⁰⁷ Project FLAT-TOP Historical Report, FY 1965, op. cit., pp. 22-24.

Pending establishment of further maintenance battalions, the PMO operated by the following command control lines:

PROJECT FLAT-TOP
COMMAND LINE-FAMF

AMC

SMC

FLAT-TOP
Project Office

ARADMAC

1st TC Bn

FAMF Control Center

Materiel Assistance

Corpus Christi

HQ-CO

A-CO

Upon establishment of the 2nd TC Bn, the PMO intended to obtain this proposed aviation logistical support complex:

PROJECT FLAT-TOP
PROPOSED AMC AERONAUTICAL LOGISTICAL
SUPPORT COMPLEX

ARADMAC

ARADMAC
Assigned (AMC)
Control Center

Aircraft
Maintenance
Group HQ

1st TC Bn
(Floating)

2nd TC Bn
(Ashore)

H&HQ CO
Support

A-CO
Maintenance

H&HO CO
Support
Augmentation

A-CO
Maintenance
B-CO

Detachment A
SHAD

Detachment B
NCAD

FUNCTIONS

1st TC Bn	2nd TC Bn
Remains at sea	Remains ashore, CONUS-assigned
Personnel rotation by 2nd TC Bn	Provides 1st TC Bn with replacements
Accomplishes mission off-shore	Accomplishes world-wide AMC maintenance and training missions by the use of TDY teams

The entire objective of this organization of the complex was FAMF support, to be achieved in this manner:

FAMF Workload Flow Chart

Direct Support Mission	General Support Mission	Depot Support Mission
Return to user of Maintenance Support Unit	FAMF Check, Test, Repair Overhaul, Crash Damage, Manufacturing, Analysis and Salvage	Return to Depot Stockage
	Salvage CONUS	

----- User Input Lines

----- FAMF Output lines

The PMO attempted to maximize FAMF output through this flow chart by providing for 210 worker spaces shipboard. This represented an approximate 21:17 worker to administrator ratio, slightly better than the normal 1:1 depot average.¹⁰⁸

¹⁰⁸ Ibid., Appendix II.

FAMF Organizational Establishment

The pieces of the FLAT-TOP organization fell into order very slowly. The PMO itself did not officially exist until 17 June 1964; the Corpus Christi and Charleston Field Offices followed on 22 September 1964.¹⁰⁹ This slowness was due to the essentially pragmatic character of unofficial FLAT-TOP operations; the field offices, for example, sprang up only after the need to convert and man the first FAMF won official approval. Later, in another instance, the AMC created a FLAT-TOP Liaison Office at Fort Shafter, Hawaii. In existence from 15 November 1965 to 25 January 1966, this one-officer operation functioned only to provide coordination for the FAMF's deployment to the Pacific area.¹¹⁰

With formalization of the FLAT-TOP organization, the AMC was able to proceed to create its first two, and only, TOE units. On 6 October 1964, the AMC activated the 1st TC Bn (AMD) (S) Headquarters and Headquarters Company (H&HQCo) and Company (Co) A. Adhering to TOE's 55-465T, 55-466T, and 55-467T, the battalion had 20 officers, 11 WO's, and 350 EM's, or a total strength of 381 military spaces. Assigned to the SMC and stationed at Corpus Christi, the battalion had a mission of providing depot maintenance on Army aircraft, aircraft components, avionics, avionics equipment, and

¹⁰⁹Ltr, MG William B. Bunker, DCG, AMC to CG, SMC, 22 Sep 64, Subj: [Establishment of Project Manager FLAT-TOP Field Offices at Corpus Christi, Texas, and Charleston, South Carolina].

¹¹⁰(1) AMC GO No. 67, 15 Nov 65. (2) AMC GO No. 3, 25 Jan 66.

aircraft armaments systems in either CONUS or a theater of operations.¹¹¹
On 15 September 1966, the AMC added the other TOE battalion, the 2nd
TC Bn (AMD) (S), H&HQ Co and Co A. Organized according to TDA MI W11G0300,
this second battalion was not only also located at Corpus Christi, but it
had the same strength -- 381 spaces -- as its predecessor. The 2nd Bn's
purpose was to support the 1st Bn as a replacement pool.¹¹²

Both battalions had previous Corpus Christi roots. The 1st Bn's
started on 31 January 1962, when the Office of the Chief of Transportation
(OCOFT) organized the U. S. Army Transportation Aircraft Base Maintenance
Unit at Corpus Christi. Effective 1 February 1962, the OCOFT's order
assigned the unit as an ARADMAC activity. The unit's authorized strength
was 5 officers, 4 WO's, and 179 EM's, or a total of 188 military spaces.
The unit's mission was to establish an operating program that would
compensate for the Army's lack of a CONUS replacement base for military
aviation maintenance personnel.¹¹³ This unit, later assigned to the SMC and
its subordinate unit, the ARADMAC,¹¹⁴ were discontinued on 29 October 1964.
Its spaces formed the nucleus of the 1st TC Bn.¹¹⁵

¹¹¹(1) AMC GO No. 67, 6 Oct 64. (2) Msg, CG, AMC to CO, ARADMAC, 26 Oct 64,
Subj: Activation of Flg Main Fac Proj Falftop [sic].

¹¹²(1) Msg, CG, USAMC to CO, 1st Mat CP [sic], 7 Oct 66, Subj:
Organiztn [sic] of 2nd Tc Bn (AMD) (S). (2) AMC GO No. 55, 15 Sept 66.

¹¹³OCOFT GO No. 3, 31 Jan 62.

¹¹⁴(1) SMC GO No. 150, 14 Jul 64. (2) SMC GO No. 161, 6 Aug 64.

¹¹⁵SMC GO No. 190, 29 Oct 64.

The second battalion's origins were not as long, and they bore a direct relationship from the onset to the FAMF program. The battalion's ancestor formed on 8 June 1965, when the ARADMAC created a Provisional Company (Prov Co) B for the 1st TC Bn.¹¹⁶ This unit lasted until 7 October 1966, when its spaces went to the 2nd TC Bn.

The two battalions retained their basic forms and missions for the duration of the FAMF's stay in Vietnamese waters. The 2nd Bn did, however, undergo a redesignation. On 16 November 1966, the AMC changed the 2nd TC Bn's designation to 1st TC Bn (AMD) (S) Training (Trng).¹¹⁷ This redesignation more correctly described the battalion's true role.

1st Materiel Group

After the establishment of the 2nd Bn, the FLAT-TOP organization made only one structural addition for the rest of its history. On 20 May 1966, the AMC organized the 1st Materiel Group (Logistic Support) (Log Spt) Seaborne (S) at Corpus Christi, Texas. Assigned to HQ, AMC, this group's main purpose was the provision of command and control for the two battalions and for any other future FLAT-TOP maintenance battalions. The group also had two secondary missions: one, to give such battalions staff planning and program support; and, two, to make plans and direct the execution of the AMC Aero Maintenance Programs of delivery and recovery of aircraft, new

¹¹⁶ARADMAC GO No. 14, 8 Jun 65.

¹¹⁷AMC GO No. 69, 16 Nov 66.

equipment introduction, modifications, engineering services, technical assistance to field commanders, and special projects as assigned.¹¹⁸ The PM acted as Group Commander; the Group received three civilian and 39 military spaces with which to function.¹¹⁹

Mid-1968 Personnel Strengths

Two obstacles emerge in any calculation of the combined strength of the FLAT-TOP Project. One was the existence of two temporary offices, the FLAT-TOP Liaison Office and the Charleston Field Office. This obstacle can be discounted, since both offices were short-term and had, between them, a total authorized strength of but 1 officer. The other obstacle was the constantly fluctuating strengths of the various PMO administrative offices. This obstacle can only be side-stepped by focusing upon a representative year, such as FY 1968:

30 June 1968 AUTHORIZED PERSONNEL STATUS,
FLAT-TOP PROJECT MANAGER'S OFFICE

Element	Location	Strength		
		Mil	Civ	Total
Project Manager's Office	Washington, DC	1	2	3
FLAT-TOP Field Office	Corpus Christi, Texas	1	21	22
USA Materiel Group No. 1	Corpus Christi, Texas	10	6	16
USA TC Bn (AMD) (S) (Trng)	Corpus Christi, Texas	381	0	381
1st TC Bn (AMD) (S)	USNS Corpus Christi Bay	381	0	381
		<u>774</u>	<u>29</u>	<u>803</u>

120

¹¹⁸AMC GO No. 24, 20 May 66.

¹¹⁹Project FLAT-TOP Historical Report, FY 67, pp. 3, 14.

¹²⁰Project FLAT-TOP Historical Report, FY 68, pp. 2-3.

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On 27 March 1975, the Office of the Secretary of the Navy (OSN) formally reclassified and re-named the AV-5 Albemarle the T-ARVH-2 Corpus Christi Bay.¹²³

Work Assignments

With funds approved and a ship in hand, the PMO faced an enormous task: actual conversion. The World War II experience, as noted, was of much help, but the sophistication of modern equipment and the growing complexity of the Army's organization constituted formidable barriers. Consequently, to simplify the job, the PMO divided the ship outfitting into six major areas: Facility, Equipment, Consumables, Manpower, Documentation, and Management. As no one of these areas encompassed all of the actions taken by any one command or agency, the PMO had to define each specific action and assign it to the appropriate command or agency.

No less than 23 command or agencies were involved in the FAMF conversion. On the Army side, for example, DCSPER-DA determined and assigned the military personnel for the FAMF, while DCSLOG-DA coordinated the agreement with the MSTS to operate the CCB on a reimbursable basis, coordinated budget estimates and operating programs, provided all house-keeping items, aircraft petroleum-oil-lubricants (POL), and mobile equipment, and procured locally-purchasable Army unit items. On the Navy side, the BUSHIPS accomplished the conversion and activation of the CCB,

¹²³Secnav Notice 5030, OSN, DN, 27 Mar 65, Subj: Assignment of name to a naval ship.

These figures do not, however, represent the total AMC personnel commitment to the FLAT-TOP effort. All of the FLAT-TOP elements received administrative and logistical support from their activity hosts, and the Charleston Office even received a loan of four civilians. Thus the figures should be taken as guides only.

Ship Conversion

Ship Redesignation

The focal interest of all of these FLAT-TOP personnel was one ship, the USNS Albemarle or, as the Navy later re-named her, the USNS Corpus Christi Bay (CCB). On 3 August 1964, the DA asked the Secretary of Commerce to transfer the Albemarle permanently to the Navy for assignment to the MSTS in support of DA requirements. The Maritime Administration (MARAD), Commerce's appropriate department, granted the request on 7 August 1964.¹²¹

The Albemarle's name change took several months to effect. On 4 March 1965, the MSTS requested the CNO to re-designate the ship, noting that the Albemarle would no longer be a seaplane tender. The MSTS recommended a new name, the Corpus Christi Bay, a name derived from the home base of the embarked Army battalion.¹²²

¹²¹Ltr, Mr. George R. Griffiths, Acting Deputy Maritime Administrator, MARAD, to the Acting Secretary of the Navy, 7 Aug 64, Subj: [Permanent Transfer of the FAMF].

¹²²Ltr, Mr. G. R. Donaho, Ofc of Cmdr, MSTS, to CNO, 4 Mar 65, Subj: Assignment of classification, hull number, name, and international call sign to MSTS Aeronautical Maintenance Facility (Floating) ship; request for.

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¹²³Secnav Notice 5030, OSN, DN, 27 Mar 65, Subj: Assignment of name to a naval ship.

to include the conduct of sea trials, and the MSTs operated the CCB on a cost reimbursable basis and determined its manning requirements.¹²⁴

Work Scheduling

With a supporting cast assembled, and their roles assigned, vessel conversion could begin. This conversion was a Navy responsibility. It involved official activation of the vessel, removal of the vessel from the reserve fleet, and incorporation of the vessel into the active fleet. These were paper moves; the real tasks were the complete overhaul and rebuild of the vessel and the modernization and repair, to include new installation, of the vessel's equipment.

The DN's job was two-fold. First, the Navy had to prepare the vessel for modern ship operations. This step primarily involved the use of the services and facilities of the Charleston Naval Shipyard. Second, the Navy had to install Army-required items, particularly capital equipment, special tools and equipment, jibs, and fixtures. All work under both steps was in accordance with a MECOM/DN MIPR.

LTC Sullivan included a work schedule for the accomplishment of the conversion in his November 1964 Master Plan. This schedule consisted of

¹²⁴⁽¹⁾ PM Master Plan, 23 Nov 64, op. cit., pp. 13-15. ⁽²⁾ FLAT-TOP Annual Historical Summary, FY 65, op. cit., pp 32-40.

43 milestones, to culminate in a 2 January 1966 operational readiness. Due to conversion delays, however, the ship was not ready until 1 March 1966.

The Navy completed ship conversion only two months late. This performance was not bad because of two considerations: one, the difficulty in obtaining replacement parts for a 25-year old ship; and, two, the need to add modern equipment and to modernize older equipment. The shipyard, for example, automated the FAMF's boilers, a procedure which involved designing, building, and testing boiler automation equipment.¹²⁵ There was yet another factor; even if late, the Navy far exceeded the COA's pessimistic late FY 1966 or early FY 1967 completion estimate.¹²⁶

Conversion Funds

The key issue in the Albemarle's conversion was money, not time. Even before conversion had begun, estimated conversion costs had risen from a modest \$4.383 million to \$12.5 million. Soon after conversion began, the costs began to escalate even further.

On 13 April 1965, the Navy started the cost escalation rolling

¹²⁵Project FLAT-TOP Annual Historical Summary, FY 1966, pp. 15-18.

¹²⁶2nd Ind, BG W. E. Brinker, Assistant Director of Army Budget (Operations) to Comptroller and Director of Programs, HQ, AMC, 12 Nov 64, Subj: [FAMF Costs].

again, requesting \$3.6 million for design changes.¹²⁷ This letter sparked a reprogramming action calling for an increase of \$6.037 million in FY 1965 PEMA conversion outlays. The increases covered four of the five major conversion cost categories:

TABLE 1: ADDED CONVERSION COSTS, FAMF (IN MILLIONS)

<u>Category</u>	<u>Previous Cost Estimate</u>	<u>New Cost Estimate</u>	<u>Added Cost</u>
Existing Facilities Remanufacture	\$2.000	\$ 3.265	\$1.265
Modernization of Shop Operation Spaces	3.300	4.765	1.465
Reconstruction of Shop Operation Spaces	2.400	4.605	2.205
Provision of Production Equipment	2.500	3.602	1.102
Installation of Air Purification System	1.300	1.300	.0
Total Costs	\$11.500	\$17.537	\$ 6.037 ¹²⁸

By the completion of conversion, these costs had risen even more. A final tally shows:

TABLE 2: FAMF CONVERSION COST

<u>CATEGORY</u>	<u>COST (IN MILLIONS)</u>
Design Services	\$ 3.993
Activation	4.331
Modification	12.456

¹²⁷Ltr, Chief, BUSHIPS to AMCPM-FL, 13 Apr 65, Subj: ALBEMARLE (AV-5); Modification, request for additional funds.

¹²⁸Reprogramming Action, PEMA, PMO, c. 13 Apr 65.

TABLE 2: FAMF CONVERSION COST

<u>CATEGORY</u>	<u>COST (IN MILLIONS)</u>
Outfitting	.690
Production Equipment and Special Tools	<u>3.560*</u>
Total	\$25.030

*Includes amounts of \$24,900 and \$130,000 added later for special tools. ¹²⁹

Interservice Conversion Interplay

The ballooning conversion costs and the delays in ship conversion were, in LTC Sullivan's mind, directly connected to Naval intransigence. The Navy had, after all, never been in favor of the project and had, consequently, created several obstacles to conversion. As LTC Sullivan noted:

"It appears that the Army's requirement had never been taken seriously [by] a few strategically placed members of the Navy staff....[They dismissed the Army's vessel studies as] 'exercises in futility'.

It was no surprise to LTC Sullivan, therefore, that the Navy would propose to perform overseas Army aviation maintenance and that the Navy had initially offered the Army the worst and most expensive vessel to convert, the

¹²⁹ (1) Paper, Mr. Lehn, Programs Division, FLAT-TOP Field Office, 19 Aug 69. Conversion work continued into FY 1969: (2) Data Sheet, Mr. F. P. Gross, Engineering Division, FLAT-TOP Field Office, 6 Oct 69, Subj: 1969 Yard Overhaul Cost Analysis.

USNS Bunker Hill.¹³⁰ LTC Sullivan worried, and he cautioned Mr. Flaherty to detail all future Navy cost increases.¹³¹

Nevertheless, despite overruns and reservations, the Navy began conversion work upon approval of the modification plan on 24 September 1964. The completion due date was 1 December 1965. This goal soon faced two difficulties. The first was procedural; the Navy elected to convert the FAMF on a non-priority basis, an election that quickly caused the project to fall behind schedule. The PM righted matters by obtaining a DOD CUE-CAP 3A, Master Urgency List (MUL) priority for the project.

The second difficulty arose from shortages of skilled laborers, materials, prefabricated parts, and supplies. The Army helped overcome the laborer shortage -- in shopfitting, electricity, and welding -- by drawing appropriately skilled workers from its own ranks. The Navy Yard itself overcame most of the goods shortages by manufacturing needed items.¹³²

The foremost conversion problem, however, was neither priorities nor shortages, but rather the conversion objectives themselves. As time passed, the Army began to press for more and more ship improvements, a move sure

¹³⁰ (1) MFR, LTC John F. Sullivan, 9-15 Jun 64, op. cit., p. 3. (2) On Naval staffing obstruction, see MFR, LTC John F. Sullivan, 16-17 Jun 64, [p. 1].

¹³¹ Ltr, LTC John F. Sullivan, PM, FLAT-TOP, to Technical Advisor, Project FLAT-TOP, 16 Feb 65, Subj: Evaluation of Cost Estimating Factors for USNS ALBEMARLE.

¹³² Project FLAT-TOP Annual Historical Summary, FY 1966, op. cit., p. 25.

to cost both time and money. Finally, on 18 February 1965, the BUSHIPS concentrated the Army's new needs into one document for joint approval.

There were eleven change requests in the document. These 11 changes concerned: one, use of a single ship service laundry instead of two - one each for the MST and Army personnel; two, automation of the ship's boilers to cost \$265,000, but offering a savings of six crewmen at a cost of \$53,000 per annum; three, installation of extra Army medical and dental equipment, as per OTSG desire; four, separation of communications facilities - Army needed constant ship-to-shore traffic lines, while MST had only periodic requirements; five, installation of an antenna multiplex distribution system for all on-board personnel - to cover stateroom, berthing, mess, recreation, and medical areas; six, relocation of crew mess facilities to insure comparable services to MST and Army senior EM's; seven, rearrangement of stateroom space to provide single occupancy staterooms for all qualifying MST personnel; eight, revision of plans and specifications to provide space and accommodations for an Army chaplain; nine, extension of air-conditioning system to include all of the ship's shops; ten, increase of Army berthing spaces to accommodate as much of the 380-man 1st TC Bn aboard as possible -- to meet increased mission requirements; and, eleven, installation of extra loudspeakers on the ship's bridge in order for the bridge to monitor approaching aircraft during those times when the aircraft control tower was unmanned. The AMC FLAT-TOP Action Officer and

representatives of the PM, the MSTS, and other appropriate signatories agreed to all eleven changes.¹³³

Ship Operation

MOU

On 4 August 1964, as the Albemarle conversion was winning approval, the AMC and the MSTS held an initial Cross Service Agreement Meeting. Attendees included LTC C. M. Cook, the DPM, FLAT-TOP, and representatives of OCOFT, MSTS, and the AMC's General Counsel Office. Their purpose was to determine those procedural ground rules necessary to complete a Memorandum of Understanding (MOU) for the operation of the Albemarle.

The meeting succeeded in establishing a pattern for MOU construction. This pattern called for the Army, working through the OCOFT, to use sub-committee personnel experts. Each expert would detail the duties in his respective field; the medical expert, for example, would list the medical, sanitation, and industrial hygiene responsibilities to be assumed by both the Army and the MSTS aboard ship. The expert's findings would be incorporated with the outputs of other experts into a legal document by OCOFT and MSTS legal personnel, with the AMC PM and the

¹³³Ltr, Chief, BUSHIPS to CG, AMC and Commander (CDR), Charleston Naval Shipyard, 18 Feb 65, Subj: Albemarle (AV-5); Modification changes, Army agreement to.

Navy BUSHIPS monitoring the preparation phase.¹³⁴

Preparations of the MOU lasted about seven weeks. By 24 September 1964, a draft agreement was ready for signature. According to its terms, the MSTS was to operate the Albemarle on a cost reimbursable basis. The MSTS's duties were to include determination of ship crew requirements; operation of the ship's messing facilities, the Navy's on-board communication equipment, and the complement's laundry service; and co-sponsorship, with the Army, of the ship's movie and library services.¹³⁵ Both sides accepted the agreement, and it remained in force, with minor modifications, for the full term of the FAMF's deployment.¹³⁶

Technical Manning

Naval assumption of the responsibility for the FAMF's operational crew left the Army with the far more difficult task of providing her functional manpower. The Army's role was not as easy, for it faced, as did its World War II counterpart, both severe shortages in, and competition for, skilled

¹³⁴ MFR, LTC Carroll M. Cook, DPM, FLAT-TOP, 4 Aug 64, Subj: Initial Cross-Service Agreement - Project FLAT-TOP.

¹³⁵ (1) Project FLAT-TOP Historical Report, FY 1965, op. cit., p. 40.
(2) USA Mat Gp No. 1 Historical Summary, Annex A, op. cit., p. [16].

¹³⁶ A 1965 redraft of the MOU, for example, discussed such issues as command channels for ship orders, uniform regulations, and the provision of bed linen and towels: Memo, L. F. Worrall, MSTS, Subj: Conference concerning Memorandum of Agreement for USNS CORPUS CHRISTI BAY (T-ARVH-1) on 26 Aug 65, T-7 Bldg, AMC.

workers. The Army also had an additional handicap of being restricted to 276 maintenance personnel on-board the FAMF, with 104 other men assigned to shore duty at Corpus Christi.

The DA obviated FLAT-TOP's manpower search for several months. In October 1964, at PM insistence, the Office of Personnel Operations (OPO) published a news letter which asked for volunteers with specific skills so that FLAT-TOP could selectively choose the best. By January 1965, FLAT-TOP had used this lever to recruit a small nucleus of highly skilled EM's. At that time, however, the OPO withdrew this authority from FLAT-TOP, largely at the objections of CONUS units which were losing key personnel.

FLAT-TOP immediately felt the effects of the OPO reversal. The results were most particularly severe in the avionics, armament, and components repair fields. Each of these fields was in heavy demand in the then expanding Vietnam commitment compounding FLAT-TOP's problems.¹³⁷

FLAT-TOP's real manning problem, of course, was that it was essentially a floating depot manned by soldiers, not civilians. The specifically tailored shipboard battalion, even with the CUE-CAP rating on the DOD MUL, could not therefore readily be filled, because CONARC had not been prepared, nor would it be, to train soldiers to perform AMC depot-level aviation maintenance. Consequently, the AMC would have to do the job itself, with whatever resources it could muster.

¹³⁷ FLAT-TOP Annual Historical Report, FY 1965, op. cit., pp 27-28.

One source could be civilians. On 20 September 1965, the PMO recommended the....maximum use....of civilian manpower even in areas of potential hostile action....¹³⁸ The PMO based its recommendation on a July 1965 staff study by the ARADMAC which discussed the use of 22 civilian instructor/technicians on-board the FAMF.¹³⁹ By 31 August 1965, the PMO had refined this civilian total to 20, to include 18 mechanics.¹⁴⁰

The civilian use concept had potentially far-reaching TDA implications. As advanced, it called for a temporary core of Department of the Army Civilians (DAC's) who would serve as: one, substitutes until suitable uniformed replacements could be found; and, two, instructors for such replacements. Once on the TDA, however, these civilians might become permanent FAMF additions, especially if: one, the FAMF could not acquire or retain a sufficient percentage of its military authorized strength; and, two, if the civilian element proved more stable as a permanent party. These possibilities, however, remained such, for the use of civilians on-board the FAMF did not win acceptance. The PMO was left to struggle to fill its TDA.

¹³⁸ Ltr, AMCPM-FL to DCSLOG, LOG/A(MR), 20 Sep 65, Subj: Recommended Personnel Replacement Plan, Floating Aircraft Maintenance Facility Project (Project FLAT-TOP).

¹³⁹ (1) MFR, Mr. Jimmie L. Rhodes, Actg Deputy Chief, FLAT-TOP Field Office, 5 Aug 65, Subj: Utilization of Civilian Technicians on the FAMF. (2) DF, FLAT-TOP PM to Ch, FLAT-TOP Control Center, 20 Jul 65, Subj: TO&E Vacancies, 1st TC Battalion. (3) Staff Study, Mr. Joe E. Denton, Production and Materiel Management Division, FLAT-TOP Field Office, 14 Jul 65, Subj: Civilian Instructors on FAMF.

¹⁴⁰ DF, Mr. Jimmie L. Rhodes, Actg Dep Ch, FLAT-TOP Field Office to AMCPM-FL, 31 Aug 65, Subj: Concept for Operation utilizing DAC to supplement troop labor on the FAMF.

Technical Replacements

Even if the FAMF was fully staffed at the onset with skilled personnel, there was yet another obstacle. This was the FAMF's short-tour assignment, which meant a yearly crew rotation. As months of instruction in technical fields and seamanship were necessary for crew replacements, the FAMF needed a standby group.

LTC Sullivan proposed the creation of a second battalion as that group. The primary mission of this auxiliary battalion, which would be somewhat larger than the deployed battalion, would be the provision of trained replacements for the floating element. The AMC would supply the material and facility resources to train the battalion, as well as 402 extra personnel spaces to man it. Initial cost would be about \$113,000 per year, not including use of ARADMAC tools and training devices. To be effective fully, the replacement group needed to begin training not later than 1 March 1966, in order to replace the first group when it returned to the CONUS in February 1967.

LTC Sullivan's proposal, upon detailed examination, involved far more than the establishment of a ready manpower reservoir. It also offered: one, a permanent increase of FLAT-TOP Project personnel; two, the possibility of permanent stationing of the FAMF; and, three, a great potential for the conversion and use of more FAMF's, either through the immediate deployment of substitute personnel in the proposed 1.8 replacement to 1 deployed ratio, or through use of the substitute element as a training base for

crews for other FAMF's. All three offers meant one thing: Project growth.

The proposal contained two complementary provisions to promote this growth. One was the use of a so-called Red, White, and Blue Concept for FAMF manning. The Red Team, the 1st TC Bn, would man the FAMF first; the White Team, the 2nd TC Bn, would replace the 1st; and the Blue Team, a sub-strength group, would serve as a replacement for the 2nd TC Bn. Both replacement battalions would constitute manpower sources for the entire FAMF operation; they would also furnish technical assistance, aircraft delivery and recovery, and new equipment introductory teams to DOD users. In order to better execute this expanded mission, the battalions would receive a new barracks, the second provision. LTC Sullivan intended to submit a Military Construction, Army, (MCA), request for these barracks in FY 1967. The combination of these provisions, then, would entrench and promote FLAT-TOP.

LTC Sullivan had relied heavily upon Navy POLARIS Submarine experience in constructing his proposal. Perhaps the most significant aspect of this experience was the stability it offered. By, in effect, permanently stationing all FAMF personnel in Corpus Christi, LTC Sullivan solved two problems. First, he eliminated much of the personnel replacement costs of other units, particularly those incident to Permanent Change of Station (PCS) moves. Second, he struck down a negative morale factor for FAMF

service families by removing constant relocation anxieties.¹⁴¹

The colonel's arguments for a second battalion made slow progress, and the 1st TC Bn deployed early in 1966 without a formal replacement element. An informal expedient, Provisional Company B of the battalion, formed by ARADMAC on 8 June 1965, had to suffice.¹⁴² Meanwhile, LTC Sullivan continued his battalion campaign. On 11 August 1966, he summarized his arguments for another battalion to the AMC Comptroller,¹⁴³ and on the following day, he pressed the AMC Personnel Directorate to initiate General Order (GO) actions for the Second Battalion's (2nd Bn's) establishment.¹⁴⁴

LTC Sullivan's efforts soon met success. On 17 August 1966, the ACSFOR gave his approval to the establishment of the 2nd TC battalion, with a total of 381 military spaces, 18 of which were permanent party spaces. On 15 September 1966, in response to the ACSFOR's approval, the AMC formally organized the Second Transportation Corps Battalion (2nd TC Bn) (Aircraft Maintenance Depot) (AMD) (Seaborne) (SBN) (Training) (TRNG),

¹⁴¹Ltr, MG William B. Bunker, DCG, AMC, to DCSLOG, 15 Jun 65, Subj: Recommended Personnel Replacement Plan, Floating Aircraft Maintenance Facility (Project FLAT-TOP), with 1 Incl, Staff Study, Project FLAT-TOP, 14 Jun 65, same subject.

¹⁴²ARADMAC GO No. 14, 8 Jun 65.

¹⁴³Ltr, AMCPM-FL to AMCPT(C), 11 Aug 66, Subj: Replacement Manning for FLAT-TOP FAMF #1.

¹⁴⁴DF, AMCPM-FL to AMCMS-MO, 12 Aug 66, Subj: Request for Issuance of USAMC General Order.

assigning it to the 1st Materiel Group (Mat Gp) Logistic Support (LOG SPT) Seaborne (SBN). The new battalion TDA was M1 W11G0300, which called for a HQ&HQ Co and a Co A, and a total strength of 381 men, consisting of 20 Officers (O's), 11 WO's, and 340 EM's.¹⁴⁵ On 16 November 1966, in order to reflect better the battalion's mission, the AMC re-designated it the Tc Bn (AMD) (SBN) (TRNG).¹⁴⁶

Naval Crew

As per the MOU, the MSTs furnished a crew to man the FAMF. This crew was civil service, consisting of 130 men--25 O's, 12 chief petty officer's, and 93 hands. Captain Harry Anderson, Jr., was the first ship's master.¹⁴⁷

¹⁴⁵ AMC GO No. 55, 15 Sep 66.

¹⁴⁶ (1) AMC GO No. 69, 16 Nov 66. (2) Msg, CG, AMC, to CO, 1st Mat Gp, 7 Oct 66, Subj: Organization of 2nd TC Bn (AMD) (S). A replacement battalion publication thus joined the FAMF official publications list. The first was (3) [AMCPM-FL], FAMF Replacement Battalion Training Requirements, [FY 66].

¹⁴⁷ [Ed], "CORPUS CHRISTI HOMECOMING HAILED," SEALIFT, Vol XXII, No. 12 (Dec 72), pp. 4-5. The CCB's other masters were Captains Sven Rydberg, Knud Mortensen, John Trik, Roy Christman, and Dunward Larsen.

CHAPTER II

DEPLOYMENT

The First Phase

1966

Final Preparations

The assembly of the naval and army crews was complete by January 1966. Paralleling, of necessity, the completion of vessel conversion, this step marked the final stage of preparations to put the FAMF to sea. All that remained were underway trials and a thorough naval inspection.

The underway trials, in combination with a materiel inspection, occurred 4-7 January 1966. Succeeding two preliminary trials on 14 November and 29 December 1965, these underway trials had a full agenda, which consisted of: first day, an examination of the ship, to include hull structure and all of its contents; second day, an evaluation of the ship's performance underway, to include turns, reversals, and other ship maneuvers; third day, continued inspection of the ship in its berth; and, fourth day, critique.¹⁴⁸ On 24 January 1966, the Bureau of Inspection and Survey, DN, Washington, published its findings on these four days.

The findings were approbative, but reserved. Basically, the board

¹⁴⁸ Underway Trials & [sic] Materiel Inspection USNS CORPUS CHRISTI Bay (T-ARVH-1) 4-7 January 1966, Charleston Naval Shipyard (CNSYD), c. Jan 66.

concluded that, while the ship had many deficiencies, it should not be rejected. The deficiencies, however, did prevent the ship from meeting Naval standards for self-sufficient operations for 90 days. Consequently, the Navy should accept the ship only on condition of correction of the deficiencies.

This stipulation was no real barrier. All the deficiencies were minor, such as the improper operation of a dishwashing machine in the crew's scullery and a non-installed X-ray machine.¹⁴⁹ In consideration of these minor drawbacks, the Navy, represented by Cpt Anderson, MSTS, accepted and signed for the CCB at the Charleston Naval Shipyard on 11 January 1966. LTC Robert A. Filby, representing the Army and the FLAT-TOP PMO, also signed.¹⁵⁰

The accepted vessel was 538 feet (ft) in length, had a 69 ft. beam, had a 23 ft. draft, loaded, displaced about 16,000 tons, and rose 126 ft. above the water at its foremast. The ship had 11 total decks and levels, including 2 platforms and 5 decks. The power for the ship came from 4 steam turbines, each of which generated 4,000 horsepower (h.p.). Two engines drove each propeller shaft, enabling the CCB to make 18 knots at 80 percent power.¹⁵¹

¹⁴⁹ Findings, Board of Inspection and Survey, DN, Board President to CNO, 24 Jan 66, Subj: Report of Combined Acceptance Trials and Materiel Inspection of USNS CORPUS CHRISTI BAY.

¹⁵⁰ USA Mat Gp No. 1 Historical Summary Annex A, *op. cit.*, p. [41].

¹⁵¹ Information Brochure, [PMO, FLAT-TOP], 1st TC Battalion (Aircraft Maintenance Depot) (Seaborne), c. 1 Jul 66.

Shop Capabilities

The ship for which Cpt Anderson signed was, as LTC Sullivan had intended, a veritable floating depot. Although not all machinery was either in place or functioning properly, the FAMF nonetheless had great capabilities and even greater potential in aviation maintenance. The FAMF contained 36 production and support services, including 20 shops.

The Avionics Shop was manned by 3 supervisors, 14 avionics technicians, and 2 airborne radio repairmen. This shop had general support (GS) and limited depot-level capabilities on all standard Army avionics systems. In Vietnam, this shop would overhaul Input/Output (IO)-998 Indicators, Revolutions Per Minute (RPM) Warning Boxes, and Stability Augmentation System (SAS) and Speed Trim components.

The Armament Shop had 4 aircraft armament repair technicians. This shop could test and repair both weapons and their sights. Subject weapons included the M5, XM3, M16, XM21, XM27, and XM28 aircraft guns, the COBRA's MARK 8 Sight System, and the Infantry's M14, M75, M79, and M60 weapons.

The Engine Shop had 24 EM's. This shop contained an oil flow bench, sonic cleaning equipment, engine work stands, an overhead monorail system, an anti-icing component test stand, a balancing machine, two turbine engine test cells, and various special and common tools. Vietnam engines treated included the T-53 and T-55 turbine engines.

The Transmission Shop had 11 EM's. Shop equipment consisted of a sonic filter cleaner, several overhaul stands, an arbor press, a speed

lathe, a grinder, a transmission and gear box load run stand, and many types of special and common tools. These assets were to make the FAMF the only in-country facility able to overhaul completely the UH-1 and AH-1G main transmissions. The assets also enabled the FAMF to overhaul completely 42° and 90° gearboxes.

Other shops, which offered direct repair support services, included a Bearing Shop, a Non-destructive Test Shop, an Oil Cooler Shop, a Carburetor and Fuel Control Shop, a Rotor Head Shop, a Propeller and Rotor Shop, an Electrical Shop, an Instrument Shop, a Hydraulic Shop, a Sheet Metal Shop, a Machine Shop, a Heat Treat Shop, a Welding Shop, a Plating Shop, a Parachute and Fabric Shop, and a Carpenter Shop.¹⁵²

As the variety of shops suggest, the AMC's commodity commands and the ARADMAC made many equipment line inputs in preparing the FAMF for duty. These inputs consisted of 5,069 equipment lines types, 12,963 parts, and 2,889 technical manuals. The ARADMAC also had to process the 9,837 ECOM and 2,550 AVCOM spare lines and to provide various types of shop support equipment.¹⁵³

¹⁵²(1) Staff Study, HQ AVSCOM, 16 Mar 70, 2 vols., "FAMF Cost/Performance Analysis Study of the Floating Aircraft Maintenance Facility (FAMF)", Vol. II, Appendix 15, pp. vii, 1-35. (2) Draft TOE, LTC John F. Sullivan, PM, FLAT-TOP, 13 Jul 65, A Proposal: Table of Organization and Equipment, Draft Tentative NRs 55-465, 466, and 467.

¹⁵³FLAT-TOP Annual Historical Report, FY 1965, op. cit,
pp. 34-37.

Charleston Departure and Deployment

After MSTs acceptance of the CCB, the first move of the ship was from the Charleston Naval Shipyard (CNSYD) to the CHAD, on 12 January 1966. On the 14th of the same month, in recognition of the completion of ship conversion, the AMC discontinued the Charleston Field Office. This closure was effective the next day.¹⁵⁴

The CCB left Charleston the day the Field Office closed, making sail on the first leg of a circuitous route to Vietnamese waters. This initial leg ended at Corpus Christi, Texas, on 22 January 1966. On the next day, 23 January 1966, the PMO formally dedicated the CCB at Corpus Christi.

On 1 February 1966, the CCB left Corpus Christi, embarking upon a second, intermediate stage before final passage to Vietnam. This second stage carried the ship first to the Todd Shipyard, Galveston, Texas. The CCB reached Galveston 2 February 1966, drydocking and receiving an evaporator. On 17 February 1966, the CCB left Galveston, bound for the Humble Oil Company's docks at Baytown, Texas. There the CCB took on fuel and other petroleum supplies, concluding her preparations for the long Vietnam trip.¹⁵⁵

¹⁵⁴Msg, HQ, AMC, to CO, CAD, 14 Jan 66, Subj: Discontinuance of FLAT-TOP Field Office, S. C.

¹⁵⁵USA Mat Gp No. 1 Historical Summary, Annex A, op. cit., pp 41-44.

On 18 February 1966, this trip began, and it would occupy a largely uneventful 6 weeks. On 21 February 1966, the CCB reached Balboa, Panama Canal Zone, and departed there the following day. The ship's itinerary continued as follows:

<u>Visited Port</u>	<u>Arrived</u>	<u>Departed</u>
Pearl Harbor, Hawaii	7 March 1966	16 March 1966
Naha, Okinawa	28 March 1966	30 March 1966
Cam Rahn Bay, Vietnam	2 April 1966	--

In order to enhance crew morale, the ship's crew had liberty at every port of call.¹⁵⁶

The ship had only one big problem as she churned towards Vietnam: the air-conditioning was totally inadequate. The winter trials off Charleston had not taxed, or tested, the system, and its first real encounter with tropical weather occurred three days south of Galveston. The air outside the ship ranged from 90° to 98° Fahrenheit (F) during daylight hours; it was even warmer inside the ship.

In an effort to rectify this problem, the PMO requested 5 5-ton, 440-volt, upright-type, salt-water cooler air conditioning units, to be installed in Honolulu, Hawaii.¹⁵⁷ On 10 March 1966, with AMC approval,

¹⁵⁶ [Information Brochure], [1st TC Bn (AMD) (S)], 1st Transportation Corps Battalion, Aircraft Depot Maintenance (Seaborne), 1965-1966, c. 1 Jul 66, p. [17].

¹⁵⁷ Msg, AMCPM-FL-FOT-R to AMSWE-SMM-TE, 25 Feb 66, Subj: Additional Equipment for Project FLAT-TOP.

the CCB took the extra units aboard. The ship also, as a supplement to these units, spent 6 extra days in Honolulu for air compressor repair.¹⁵⁸

The Honolulu measures were almost useless. Once in Vietnam, where the outside daytime temperatures ranged between 102° to 114° F, the ship was a floating oven. The ship's beams and uprights were not insulated; their temperatures read 135° and 128° F, respectively. The ship's top three decks, none of which had heat-generating equipment, averaged 118° F inside. On the boat deck, there were 3 heat-generating shops; their air temperatures read from 120° to 137° F. The cobbler and laundry areas, which lay above the boiler room, were about as bad; the cobbler shop air stayed at a constant 112° F, day or night, and the laundry ranged from 115° to 130° F. Besides the obvious work problems caused by this heat, there were other associated problems; the 93 percent humidity in the laundry soaked even the most recently pressed clothes and linen.

Intensive investigations revealed several deficiencies in the air conditioning system. This system consisted of four main units, more than 100 ship-wide distribution centers, and over 300 valves. Chilled water came from the main units to the distribution centers by being pumped through coils.

Problems abounded at all points beyond the central units. One of the units, to begin, had its intake lines attached to the discharge side

¹⁵⁸USA Mat Gp No. 1, Historical Summary, Annex A, op. cit., [pp 47-48].

of the tank. This caused the unit to release 60° F water, not its proper 45° F water. Many of the blowers aggravated this condition: installed backwards, these sucked air into the return line instead of blowing return air into the coils. Finally, several valves for pumping chilled water into the distribution coils were found to be improperly installed or closed. Remedial action for these problems required months.

To further enhance the air conditioning system, LTC Sullivan proposed several measures. These included the requisition of awnings and hatch tents, the refurbishment of the auxiliary cooling units, the installation of porthole fans and stack louvers, the encasement of the aft engine room from nearby EM accommodations the improvement of the galley ventilation systems by the addition of hoods and larger fans, and the re-conversion of the central air system back to its original design of four 100-ton units. All of these changes were to be done during the July 1966 Subic Bay yard period.¹⁵⁹

The key provision to this proposal was the re-conversion of the air-conditioning system. This provision immediately drew fire; the MSTs would not agree to such a step without a design investigation of the adequacy of the ship's present air-conditioning system. As the Naval investigation did not begin until August 1966, the re-conversion could not be done that July.¹⁶⁰ Consequently, the air-conditioning work did not appear on

¹⁵⁹MFR, LTC John F. Sullivan, PM-FL, to CG, AMC, et al., 12 Jul 66, Subj: Air Conditioning-T-ARVH-1.

¹⁶⁰USA Mat Gp No. 1, Historical Summary, 15 Jan 73, Annex A, op. cit., [p. 60].

a FAMF shipyard work period schedule until 15 November 1966.¹⁶¹ This schedule called for three additional air-conditioning plants, installation of salt-water condensers, and extension of the chilled water system. None of the work was high priority,¹⁶² and its accomplishment eventually acquired the character of a long-range desirable objective.¹⁶³

On-Station

Faulty air-conditioning or no, the FAMF arrived off Vung Tau, RVN, on 2 April 1966, to begin almost seven years of aircraft repair and sundry other tasks. This arrival was not auspicious. It would be sometime before RVN Commanders could fully appreciate the FAMF's capabilities, and the crew of the CCB would also need time, time to adjust to shipboard living and working conditions, to perfect machines and procedures, and to fit the ship into the surrounding logistics scheme. Anticipating such problems, FAMF planners predicted no more than a 45 percent production capacity flow by the end of the first six months, and 65 percent by the first year's end.¹⁶⁴

Nevertheless, despite such predictions, the FAMF produced about 1,600 items in the three final months of FY 1966. These items cost

¹⁶¹Project FLAT-TOP, Army Work Specifications and Requirements for the USNS Corpus Christi Bay 1967 Dry Dock, revised 15 Feb 67.

¹⁶²Ibid., pp. 2-7.

¹⁶³Project FLAT-TOP, Annual Historical Summary, FY 67, p. 11.

¹⁶⁴Project FLAT-TOP, Annual Historical Summary, FY 66, op. cit., p. 29.

\$240,426 to repair, exclusive of MSTS costs, but their acquisition value totaled \$2,316,516, and the work removed over 300 pieces of equipment from deadline. This formal output, moreover, did not include such items as metallurgical support to accident investigation teams, medical and dental support to US Army and Navy personnel, fresh water manufacturing, engine check, test and repairing facility work, and parachute repair and repacking. The FAMF also prepared for even more output, functionally changing some shop layouts.¹⁶⁵

Procedural Improvements

In order to better its FY 1967 output, the FAMF took two steps:

First, it established liaison with shore installations, wrote operating procedures, and arranged to receive all of its work from one central shore activity. This activity was the Aviation Materiel Management Center (AMMC) of the 34th General Support Group, which maintained accountability. With this scheme, the FAMF received components at a nearby shore point, either delivered by air or truck. The FAMF then picked up, repaired, and returned these components on a regular schedule. The FAMF's average component "turn-around" time was 6.6 days, as compared to 18.5 days for "Red Ball" items.

The FAMF's second step was to establish a "closed circuit" mission parts and supply pipeline for its resupply. Under the terms of this

¹⁶⁵Ibid., pp. 29-30.

system, the ship would requisition parts from the ARADMAC's "shelf", if available. If the ARADMAC did not have a part, then the supply line would follow a "dues-out" procedure, requisitioning the piece from the appropriate National Inventory Control Point (NICP). This procedure, in practice, resulted in an average supply time of 37 days. Some items, however, arrived in only 8 days. By 30 June 1966, the FAMF had received about 108 tons of supplies. Most of the aircraft items traveled by air freight, via the Military Airlift Command (MAC).

The FAMF co-ordinated this parts flow with its workload by a 90-day scheduling program. Set in consonance with shore elements, this program functioned through a FAMF shore party. This party screened candidate reparable for the ship's repair ships, discarding those that the ship could not repair. This system was pleasing, and it continued to be used in FAMF operations.

Production Obstacles

The FAMF had two unavoidable obstacles in repairing:

The first was a Naval regulation to maintain 55 percent of total ship fuel capacity, a requirement that caused the FAMF to leave station about every 45 days for re-bunkering. The re-bunkering, during which time fresh provisions also came aboard, usually required five days. These five days, plus two days for departure and return, kept the FAMF from Vietnam approximately seven days of each 45. Though repair work would continue while the ship was underway, rough seas would prevent

delicate work, such as calibration.

The second obstacle was the FAMF's periodic yard periods. Such periods were a necessity for all steel-hulled ships, for steel bottoms, unlike plastic-coated bottoms, soon became covered with marine growths that hindered navigation and covered exhaust outlets. Consequently, after a year in the water, the FAMF would have to steam to a permanent port with sophisticated dry-docking facilities. At such a port, the FAMF had to have her hull scraped and receive cleaning. All work, of course, ceased during such periods.

For FY 1966, however, there was only one disruption. From 15 to 25 May 1966, the CCB left station, went to Subic Bay, Philippine Islands (P. I.) for replenishment, and returned to station.¹⁶⁶ Thus the ship spent 80 of its first 90 deployment days on station.

O&MA Outlays

Project FLAT-TOP utilized its FY 1966 O&MA funds as follows:

<u>FUNDING CATEGORY</u>	<u>AMOUNT</u>
BP 2000	\$153,700
BP 2100	72,039
BP 2200	1,724,500
BP 2300	<u>2,581,600</u>
TOTAL	\$4,531,839

¹⁶⁶ (1) Project FLAT-TOP Historical Report, FY 67, op. cit., pp. 11-13.
(2) USA Mat Gp No. 1, Historical Summary, 15 Jan 73, Annex A, op. cit., pp. [51-52].

The BP 2000 money paid for the operation of the 1st TC Bn before its February 1966 overseas departure. It included the cost of operating supplies and equipment, TDY, aircraft operation and maintenance for proficiency flying, laundry and dry cleaning services, and other pertinent items. BP 2000 also covered the activation cost of the 1st Mat Gp (Log Spt) (Sbn) and the outlays for the control of supervision of 1st TC Bn replacement personnel.

The BP 2100 outlays, the smallest of all categories, paid for 1st TC Bn training costs in two increments. The first increment covered the per diem and travel related with the battalion's final training phases; the second increment covered the early per diem and travel training costs of the battalion's replacement personnel. Most costs went to civilian institutional training.

BP 2200 expenditures went almost entirely to the MSTs for operating the CCB. The DCSLOG programmed and paid for the MSTs costs, amounting to \$1,591,207. Of the 133,476 remaining in the 2200 category, \$119,000 went to maintain the PM's office in Washington and \$14,476 went to pay for the commercial line haul of mission parts to the CCB.

BP 2300 funding, the largest category of all, primarily went to two areas. One was a "bloc type" payout, which was the cost of the entire basic load of repair parts for the initial provisioning of the CCB. The other area blanketed the entire cost of operation of the PM's Field Office at Corpus Christi, Texas. This cost included 161 temporary duty

(TDY) trips for 1,328 man-days, personnel salaries, operating supplies, ARADMAC direct and indirect support costs, and, most importantly, the mission repair parts, capital equipment, special tools, automatic data processing (ADP) rentals, TDY costs, and other monies associated with the actions of the operating battalion aboard the CCB.¹⁶⁷

1967 - 1970

FY 1967

Production

Despite all of the FY 1966 preparatory efforts, the FAMF did not attain its full production potentials in FY 1967. Growth in output, however, was steady, and by the year's end the shops were working a 6-day week, 9-1/2-hour day. Moreover, the engine, transmission, electrical, avionics and 9 other shops and supporting activities had 2-shift operations underway.

The total acquisition value of the items repaired or overhauled by these shops was \$17,320,689. This figure included 15,448 items which, if they had gone to the CONUS for repair, would have cost an additional \$1,776,050 in handling and shipping charges. The FAMF also salvaged 376 tons of materiel, saving a further transportation cost of \$78,377. The FAMF's work removed 428 Army aircraft from deadline, averaging 12 days earlier than Red Ball could have. The result was

¹⁶⁷Project FLAT-TOP, Historical Report, FY 66, op. cit., pp. 21-24.

about 5,000 additional aircraft availability days.

Costs

O&MA. The FAMF's O&MA costs, reflecting a full year's operations, increased markedly in FY 1967, outlays fell into these funding categories:

<u>FUNDING CATEGORY</u>	<u>AMOUNT</u>
BP 2000	\$ 117,294
BP 2100	96,855
BP 2200	3,030,722
BP 2000 USARPAC	<u>3,106,144</u>
TOTAL	\$6,351,015

Most of the BP 2200 costs again went to the MSTS for operating the CCB. The MSTS's share was \$2,623,350. Of the remaining BP 2200 funds, \$916 was for the commercial line haul of mission parts to the CCB, \$137,000 for the operation of the Washington PMO, and \$269,456 for the operation of the Corpus Christi Field Office.

The BP 2000 USARPAC category, the largest of the fund groupings, covered costs for mission parts and supplies, replacement of worn or obsolete equipment and tools, electric accounting machine (EAM) rentals, and some TDY expenses. All BP 2000 USARPAC outlays were for the performance of the FAMF's maintenance mission.

PEMA. The original PEMA outlays, amounting to almost \$25,000,000 by FY 1967, covered equipping and readying the FAMF for sea maintenance duties.

Additional funds were to come from this category as the need arose. The PM believed that about \$200,000 would be necessary every 12 to 18 months to modernize and maintain the investment.

Personnel

Replacement of the original FAMF crew began on 5 January 1967, when a special C-141 airlift brought 95 replacement personnel from Corpus Christi to Cam Ranh Bay. The airlift then returned a like number over the reverse route. By April 1967, rotation of the first contingent was complete.¹⁶⁸

About 75 percent of all required personnel were on board as of 30 June 1967. This percentage included 11 of 16 Officers (O's), three of 10 Warrant Officers (WO's), and 261 of 340 Enlisted Men (EM's). Requisitioning for the remaining vacancies was 96 percent complete by the year's end.

The slowness of FAMF-rank filling began to affect the FAMF's training program adversely. In a wartime situation, however, there was little that FLAT-TOP could do. Especially injurious to the FAMF were shortages of WO's, aircraft engine repairmen, powertrain repairmen, and propeller and rotor repairmen. As of 30 June 1967, FLAT-TOP trainees had completed only 95,006 hours of depot training versus a total of 191,700 programmed.

Stationing

Despite manpower and training deficiencies, FAMF support achieved

¹⁶⁸Project FLAT-TOP, Historical Report, FY 67, op. cit., pp. 5-7, 10, 15.

more recognition in FY 67. On 1 September 1966, the CG, 1st Cavalry Division, requested that the ship be placed at Qui Nhon to provide direct support to his unit. The DCG, ARV, approved the request, and the FAMF dropped anchor at Qui Nhon on 21 September 1966. The FAMF remained at Qui Nhon 32 days, departing 23 October 1966.¹⁶⁹

The FAMF provided a total of 311 days of support in Vietnamese waters in FY 67. Until 23 February 1967, all of this support, excepting that at Qui Nhon, went to Cam Ranh Bay. From 23 February till the year's end, the FAMF's support went to Vung Tau. Vung Tau, adjacent to Saigon, was close to the 34th General Support Group, an element the FAMF was to support for the bulk of the war.

The FAMF left Vietnamese waters four times in FY 67. Three times it went to Subic Bay for repairs and supplies; the other trip was to Okinawa.¹⁷⁰ The FAMF also was off-station two days in October 1966, relocating from Qui Nhon to Cam Ranh Bay.

FY 1968

Production

The FAMF's productivity increased markedly in FY 1968. This increase occurred both in amount and in efficiency. The value of the goods overhauled

¹⁶⁹USA Mat Gp No. 1, Historical Summary, 15 Jan 73, Annex A, op. cit., p. [61].

¹⁷⁰(1) Project FLAT-TOP, FY 67 Year End Review and Analysis FAMF-1, pp. 2-3, 6, 8, 28. (2) Project FLAT-TOP Information Briefing, c. 1 Mar 69, pp. [15-16, 65-66].

or repaired by the FAMF in FY 1968 totaled \$43,570,855. This figure was about two and one-half times the \$17,320,689 value total of similar FY 1967 goods.¹⁷¹

This improvement was probably due to a combination of smoother shop procedures and better workloading. Not only did this combination allow greater selectivity in choosing reparable, but it also increased the turnover of such reparable.

The FAMF, moreover, received an additional production-related duty. This duty consisted of acting as the prime facility for theater crash-damage analysis. Facility personnel conducted 50 crashdamage analyses in FY 1968, and FLAT-TOP expected even more analyses in FY 1969.

The FAMF's FY 1968 production effort entailed the dispatch of 19,303 requisitions to the ARADMAC. The FAMF received 24,172 lines from the ARADMAC; this 4,869 difference in requests and receipts was due to an ARADMAC fill of dues-out carried over from the previous fiscal year. The 24,172 lines weighed approximately 308 tons, 79 tons less than FY 1967's 387 tons.

Costs

O&MA. Project FLAT-TOP O&MA costs increased almost \$500,000 in FY 1968, reaching \$6,810,725. BP 2200 spending accounted for more than one-half of this total, rising from its second place standing in FY 1967.

¹⁷¹(1) Project FLAT-TOP, FY 67, R&A, op. cit., p. 25. (2) Project FLAT-TOP, FY 1968 Year End Review and Analysis, pp. 22-24.

Nearly all BP 2200 funds went to defray \$3,380,025 in MSTS costs for operating the CCB. The remainder of the BP 2200 outlays consisted of \$89,700 for the operation of the Washington PMO, \$185,000 for the operation of the Corpus Christi Field Office, and \$37,000 for escort services performed by the US Army Materiel Group No. 1 (Logistical Support).

Over 60 percent of the BP 2200 increase went to shipyard modifications and hull cleaning. Most of the modifications were minor items, such as the installation of a floor drain in the plating shop, the rearrangement of equipment in the print shop, and the improvement of access to the transmission shop. The major items included enlargement of the air-conditioning system, expansion of the avionics shop and installation of a steam cleaner.¹⁷²

BP 2000 USARPAC outlays, the other major spending category, covered, as in the past, mission parts and supplies, replacement of equipment and tools, EAM rentals and maintenance mission-related TDY expenses. FY 1968 would be the last year for this category. Effective 1 July 1969, such outlays would fall under the BP 2300 Depot Maintenance Activity category.

PEMA. The FAMF's PEMA Program generated very little activity in FY 1968. Nearly all such funds had been obligated in 1965-66 to convert the ship, and only a small balance of \$55,312 was left to deplete. FLAT-TOP hopes to obtain a regular PEMA supplement for maintaining the FAMF's

¹⁷²Project FLAT-TOP, Army Work Specifications and Requirements for the USNS Corpus Christi Bay 1967 Dock Period, Corpus Christi, Texas, rev. 15 Feb 67, pp. [2-4].

physical assets had not yet materialized at the end of FY 1968.¹⁷³

Personnel

The FLAT-TOP Project did not reach its full personnel strength until January 1968. This happy situation, however, did not last long, for the project continued to have replacement problems. By the year's end, FLAT-TOP was short 14 EM's.¹⁷⁴

Despite the shortages, the FLAT-TOP enjoyed a far better personnel situation than it had in FY 1967. This improved position made possible a four-fold increase in training time, from 95,006 hours in FY 1967 to 383,319 hours in FY 1968. The FY 1968 training total represented about 90 percent of the 425,720 hours programmed.¹⁷⁵

Stationing

The FAMF was on-station 275 days in FY 1968, or about 76 percent of the year. The FAMF spent all of its on-station time at Vung Tau and 78 of its 91 off-station days at Sasebo, Japan. The off-station days passed as follows:

¹⁷³(1) Project FLAT-TOP, FY 67 R&A, op. cit., p. 14. (2) Project FLAT-TOP, FY 68 R&A, op. cit., p. 12.

¹⁷⁴The FAMF's second annual manpower rotation took place on 3 January 1968, when a special C-141 airlifted/delivered 96 personnel to Cam Ranh Bay and returned a like number to Corpus Christi.

¹⁷⁵(1) Project FLAT-TOP, Annual Historical Summary, FY 68, p. 11. (2) Project FLAT-TOP, FY 68 R&A, p. 7.

<u>Time</u>	<u>Port Visited</u>	<u>Day Off-Station</u>
30 Jun - 18 Jul 67	Sasebo, Japan	18
1 Oct - 30 Nov 67	Sasebo, Japan	60
4-6 Jan 68	Cam Ranh Bay	2
13-24 Apr 68	Subic Bay, P.I.	<u>11</u>
	TOTAL	91 ¹⁷⁶

The FAMF's four departures had the following purposes:

June-July - pre-entry shipyard inspection and evaluation.

October-November - scheduled ship maintenance and modifications.

January - personnel airlift transfers.

April - supplies and flush of JP-4 tanks.¹⁷⁷

FY 1969

Production

FAMF productivity, aided by a relatively full-strength, showed a continued improvement in FY 1969. The FAMF overhauled \$46,693,637 worth of goods in FY 1969. This figure was \$3 million higher than in FY 1968, or an increase of about seven percent. Moreover, FAMF personnel also produced about \$708,700 worth of work for the 765th Transportation

¹⁷⁶Project FLAT-TOP, FY 68 R&A, p. 3.

¹⁷⁷USA Mat Gp No. 1, Historical Summary, 15 Jan 73, Annex A, op. cit., pp. [77-81].

Battalion. These personnel accomplished this work in a loan status during the FAMF's May-June 1969 yard period.

In support of this FY 1969 production, the ARADMAC processed 18,271 requisitions and expended \$4,329,637. Not all of these supplies stayed on the FAMF. The FAMF used 2,169 equipment lines in that year to meet the EDP requirements of shore-based operating activities.¹⁷⁸

Costs

O&MA. Project FLAT-TOP O&MA costs jumped almost 37 percent in FY 69, reaching \$9,273,000. BP 2300 got over \$4,905,000, or over one-half, of this money. The MSTs got most of the remainder, or \$3,716,000.¹⁷⁹

PEMA. FLAT-TOP PEMA funding entered a final close-out stage in FY 1969. The FLAT-TOP PM had hoped to secure follow-on PEMA funds for renovation and maintenance of the FAMF, but the imminent de-projectization of the office dimmed his optimism. As the year ended, the PMO was making preparation to return the unobligated balance to the AMC. The 30 June 1969 PEMA status was \$14,454.¹⁸⁰

¹⁷⁸(1) Project FLAT-TOP, Annual Historical Summary, FY 69, pp. 10-11.
(2) Project FLAT-TOP, FY 69 Year End Review and Analysis FAMF-1, p. 24.

¹⁷⁹Project FLAT-TOP, FY 69 R&A, pp. 17-18.

¹⁸⁰Project FLAT-TOP, Historical Report FY 69, op. cit., p. 8.

Personnel

FLAT-TOP's personnel status offered mixed results in FY 1969. On the affirmative side, the Project was able to spread personnel rotations somewhat evenly over the year, thus eliminating the large disruptions of the past. On the negative side, however, the number of replacement personnel declined from a high of 315 in September 1968 to a low of 222 in June 1969. Replacement requests followed a reverse course, rising from 35 to 133 in the same period.

Replacement problems notwithstanding, the FLAT-TOP made yet another large jump in training time in FY 1969. FLAT-TOP personnel completed 531,269 training hours in that year, 147,950 more than FY 1968's 383,319. The FY 1969 total was about 90 percent of the 592,534 hours programmed.¹⁸¹

Stationing

The FAMF was on-station 285 days in FY 1969, or about 78 percent of the time. This record bettered the FY 1968 performance by 10 days and two percentage points. This represented a continuation of the FAMF's upward availability curve.

As in FY 1968, the FAMF passed most of its off-station time at Sasebo, Japan. On 30 April 1969, the FAMF left Vung Tau for a two month sojourn in Sasebo. This trip had two important objectives: one, the replacement of

¹⁸¹Project FLAT-TOP, FY 69 R&A, op. cit., p. 10.

the FAMF's antiquated IBM 407 Accounting Machine punch card system with an IBM 360-20 Computer System; and, two, the application of a new marine coating to the FAMF's hull to allow it to remain on-station 12 to 15 months. The FAMF returned to Vung Tau on 30 June 1969.¹⁸²

The FAMF spent nearly all of its remaining off-station time, 18 of 20 days, in a 15 September - 3 October 1968 trip to and from Subic Bay. The Subic Bay trip was for cleaning the hull and water intakes. The FAMF's only other two off-station days took place in August 1968.¹⁸³

As both the Sasebo and Subic Bay trips demonstrated, the FAMF's major reason for off-stationing continued to be marine fouling. The Sasebo coating was one answer to the problem; and agreement with the MSTS to move the FAMF periodically was another. In FY 1969, the PMO made such an agreement, declaring that it would exercise the FAMF for 12 hours every 30 days. The exercise would consist of steaming the FAMF after one day's close of business and anchoring it again for the next day's work.¹⁸⁴

¹⁸²(1) Project FLAT-TOP, Historical Report, FY 69, op. cit., p. 5.
(2) USA Mat Gp No. 1, FY 70 Year-End Review and Analysis FAMF-1, p. 4.

¹⁸³USA Mat Gp No. 1, Historical Summary, 15 Jan 73, Annex C, op. cit., p. [2].

¹⁸⁴Project FLAT-TOP, FY 69 R&A, op. cit., p. 4.

FY 1970

Production

Although the number of items processed and produced by the FAMF in FY 1970 more than doubled, the dollar value of output dropped about nine percent. Thus, while these figures show the volume increase, the value of produced goods fell about \$4.3 millions, from \$46.7 to \$42.4 millions. FAMF personnel supplemented productivity by the provision of extra-FAMF theater support. This support amounted to 14,441 hours in FY 1970. FAMF personnel used this time in the research and issue of EDP items and in the support of indirect shop production, such as the Theater Army Repairable Program (TARP).

O&MA Costs

Project FLAT-TOP O&MA costs dropped \$959,000 in FY 1970, a decrease of approximately 10 percent. Of the \$8,314,000 spent, the MSTs got \$3,925,000. BP 2300 ran second, consuming \$3,728,000.

Personnel

Despite the deprojectization of the FLAT-TOP PMO, the Group¹⁸⁵

¹⁸⁵The United States Army Materiel Group Number One assumed command control after the disestablishment of both FLAT-TOP PMO and Field Offices in FY 1970.

enjoyed a generally improving personnel situation throughout the year. Replacement personnel on-hand rose from 214 in July 1969 to 314 in July 1970. During the same period, requests for personnel dropped from 124 to 34.

Contrary to programming expectations, the greater number of personnel did not receive more training hours. Group personnel completed only 467,785 training hours in FY 1970, a drop of 63,484 hours from FY 1969's 531,269 total. The FY 1970 total was only about 71 percent of the 663,416 hours programmed.

Stationing

FAMF stationing procedures underwent two important changes in FY 1970:

First, because of the new marine hull coating, the FAMF had to leave Vietnamese waters only once. This departure, from Vung Tau to Sasebo, required 24 days, from 28 February to 24 March 1970. The FAMF had its hull cleaned at Sasebo, then stopped at Qui Nhon on the return trip to pick up a load of reparable.

Second, the FAMF began to make a series of short runs from its Vung Tau anchorage. These runs, conducted every 60 to 90 days to Da Nang and Qui Nhon, had two purposes. First, the trips brought the FAMF to the users, thus easing user difficulties in delivering reparable to Vung Tau. Second, the trip helped to satisfy the FAMF's exercise requirements.¹⁸⁶

¹⁸⁶(1) USA Mat Gp No. 1 FY 70 R&A, op. cit., pp. 4-18. (2) USA Mat Gp No. 1, Historical Summary, 15 Jan 73, Annex C, op. cit., p. [2].

The second issue was no small matter. On 19 September 1969, the Commander, MSTS proposed that the FAMF be steamed for six hours every six to 15 days to discourage the attachment of barnacles to its hull. The FLAT-TOP Commander did not concur, arguing that such frequent moves would greatly disrupt production.¹⁸⁷ The FAMF Commander had his way, for the Da Nang and Qui Nhon visits apparently satisfied MSTS concerns.

¹⁸⁷Ltr, CDR, MSTS to CG, AMC, 19 Sep 69, Subj: USNS CORPUS CHRISTI BAY (T-ARVH 1); underwater fouling, with 1st Ind, CDR, 1st TC Bn (AMD) (SBN) to AMCPM-FL-C(E), 9 Oct 69, Subj: Underway Cycle for USNS CORPUS CHRISTI BAY.

CHAPTER III. THE FAMF FLEET,

FAMF's III & IV

Fleet Background

Introduction

The FAMF's fortunes reached their height in FY 1970. The FAMF's personnel strength was at its best; its productivity, at its most cost effective; and its customer service, at its most mutually convenient. The FAMF, at this point, was on the road back to mothballs.

Much of the blame for this turn lay in the FAMF's unending exhibitory status. The FAMF, or FAMF-1, more properly, was after all to be, as far as the FLAT-TOP PM was concerned, the first ship in a FAMF fleet. As a consequence, the FAMF-1 was perpetually on show or under study. If it proved cost-effective, the FAMF-1 would apparently justify the FAMF-2, the FAMF-3 and so forth up to five FAMF's.

Unfortunately, however, statistics-gathering could prove to be double-edged. Such statistics might, for example, demonstrate that the FAMF-1 was not cost-effective. The statistics could then be used to question not only the operation of any FAMF, but of the FAMF-1 in particular.

The best answer to such questioning continued to be LTC Sullivan, FLAT-TOP's chief proponent, principal organizer, and first PM. LTC Sullivan had, after all, overcome formidable opposition in getting

the FAMF-1. To get more FAMF's, LTC Sullivan certainly expected, and probably even relished, resistance. Moreover, the colonel was in a stronger position now: not only did the FAMF-1 serve as a precedent, but the new FAMFs naturally drew allies. The FAMF-3, for example, as an electronics repair facility, could not fail to attract the ECOM's notice. The FAMF-4, as a mechanical engine repair ship, similarly could be expected to receive some sympathy at the ATAC.

LTC Sullivan had, of course, set his mind upon "Sullivan's Irish Navy" from the start. On 18 August 1965, with the FAMF-1 just in the Charleston yards, LTC Sullivan was saying that the

" . . . 'text book' FAMF consists of a Hq and four lines companies operating from two ships. The organization. . . . [of this text book structure at present includes only two companies,] Hq and "A" Companies [which are]. . . . component oriented and . . . manned by 221 mechanic MOS labor [sic].

b. "B" and "C" Companies, as proposed and now ready for programming action, are airframe repair companies. They are identical in structure and provide 267 maintenance men, each at full strength. The unit strength is 279 which includes 12 men without maintenance MOS's. "D" Company is a Maintenance Support Company at 175 strength with a primary mission of collection and classification of airframes and components.

c. Hq and "A" work in a seaplane tender based component repair facility [FAMF-1].

d. "B", "C", and "D" work in an aircraft transport, old ESSEX class. The transport provides command control space for the battalion and hotel accommodations for an augmentation force for the component facility if such becomes necessary.¹⁸⁸

LTC Sullivan had already drafted and submitted a reprogramming action for the USS Curtiss (AV-4), a sister ship of the old Albemarle, AV-5.¹⁸⁹

By September 1965, the next month, LTC Sullivan had traced out even bigger plans. Identifying his growing forces, he stated that:

a. The USNS CORPUS CHRISTI BAY and the 1st Battalion constitute "Facility ABLE."

b. The USS PHILLIPINE [sic] SEA proposed airframe repair facility is "Facility BAKER."

c. The now being authorized USS CURTISS to be redesignated as a T-ARVH-2 and the 3rd Battalion (number requested from TAG) will be "Facility CHARLIE."

¹⁸⁸Memo, LTC John F. Sullivan, PM, FLAT-TOP, 18 Aug 65, Subj: General Concept of Operation, FAMF Group-Battalion (Project FLAT-TOP).

¹⁸⁹Draft Reprogramming action, [LTC John F. Sullivan, PM, FLAT-TOP], c. 1 Jul 65, Subj: [Activation and Conversion of USS CURTISS (AV-4)].

Under this scheme, FAMF meant the ". . . total of Project FLAT-TOP, including ships, battalions, and Group,"190

FAMF-1 Evaluation

DA Objectives

Before LTC Sullivan could expand his fleet, however, he first had to satisfy the DA that the original FAMF could work well. On 20 December 1965, the DA made this point clearer, directing, via a CSA memorandum, that a cost effectiveness study be made of the FAMF, to include the costs of a comparable land-based facility. The American Power Jet (APJ) company received an AVCOM contract to conduct the study.¹⁹¹

The DA wanted further data, as well. On 8 February 1966, the AMC received notification that the DCSLOG wanted it to direct a comprehensive study of floating repair ships or barges for other than aviation items. The study was to be a joint in-house and contractor effort.¹⁹²

On 17 February 1966, the DA formalized and clarified this latter request. At that time, the DA requested a ship/barge feasibility study to consider 14 minimum essentials: mission, type activity, concept of

¹⁹⁰Msg, Ch, FLAT-TOP Fld Ofc, to CG, USAMC, 7 Sep 65, Subj: Identification of FAMF organization and Ships.

¹⁹¹Memo, LTC John F. Sullivan, PM, FLAT-TOP, to DCSLOG, 4 Jan 66, Subj: Status Report, Project FLAT-TOP.

¹⁹²MFR, LTC John F. Sullivan, PM, FLAT-TOP, 9 Feb 66, Subj: Feasibility Study, FAMF Add-Ons.

organization, objectives, capability, facility, Army maintenance personnel, vessel crew, operational costs, concept of operation, capital equipment, tools and test equipment, time schedule, cost saving, and shore facility comparison. The DA wanted a final study report not later than 15 September 1966.¹⁹³

This DA letter request, aside from its immediate interest, produced two significant results. First, it set forth certain DA interest study topics that would be pursued by future FAMF study groups. Second, it stimulated the output of such studies, as FAMF proponents attempted to satisfy DA interests in order to secure their own particular ends.

It is therefore instructive to examine the ten most important of these DA-stated interests in detail:

mission - establishment of the primary and secondary missions for an industrial type depot facility, to include a comparison of such missions with either those of a GS facility or those of a combined FAMF/GS facility

type activity - TOE versus TDA

capability - determination of various interworkings of commodities and equipment

facility - evaluation of hull types, to include new construction

Army maintenance personnel - estimations of strengths and costs

¹⁹³Ltr, AGAO-CC-LOG, to CG, AMC, 17 Feb 66, Subj: Floating Maintenance Facilities for Maintenance of Army Materiel other than Aircraft.

vessel crew - estimations of strengths and costs, to include possible military/civilian combinations

operational costs - total annual outlays for a manned, working vessel
concept of operation - comparison of dockside and offshore operating modes, to include the cost of helicopter and boat repairable deliveries

cost saving - estimation of savings, to include figures on unnecessary returns and excess materiel inventory

shore facility comparison - weighing of FAMF advantages and disadvantages against those of a similar shore facility.¹⁹⁴

Every one of these 10 DA questions would be raised again and again, until the FAMF's mothballing.

Evaluation Progress

Upon receipt of the DA's direction, HQ, AMC laid out the FAMF study guidelines. First, it gathered the players: its own subordinate commands, captained by the FLAT-TOP PM and a subsequently frequent contributor, the Army Maintenance Board (AMB) at Fort Knox, Kentucky. Second, the AMC set forth the study's subjects: a reiteration of the DA's study objectives.¹⁹⁵

¹⁹⁴Ibid.

¹⁹⁵Ltr, COL William E. Campbell, Jr., SGS, AMC to CNO et al., 18 Feb 66, Subj: Feasibility Study on Floating Maintenance Facilities.

The resultant study eventually broke down into two sub-studies, both of which were contracted efforts. The first sub-study covered cost and performance. The APJ, which had already received a cost effectiveness contract, became responsible for this topic, due 15 September 1966. The second sub-study consisted of an evaluation of ship equipment. The VITRO Laboratories of Silver Spring, Maryland, received this study, to be completed by 15 July 1966.¹⁹⁶

VITRO submitted its final study report on 15 June 1966. Covering the 6 March - 22 April 1966 period, the VITRO report was strongly laudatory of the job that the FAMF management had done. The report offered the following recommendations: one, that immediate action be taken to review and record systematically the shop equipment operating and maintenance environmental requirements on the FAMF-1; two, that a formal integrated test and shakedown program be completed prior to the deployment of any future ship; and, three, that the Army adopt the three Navy management assistance programs. These three were: preventive maintenance management, engineering change proposal (ECP) review, and shop/support equipment data system.¹⁹⁷

The APJ Study, the later report, proved somewhat more lengthy, stretching into a series of three reports. The first two reports primarily

¹⁹⁶Project FLAT-TOP, Historical Report, FY 66, pp. 27-28. The author could not find the costs of these studies.

¹⁹⁷VITRO Laboratories, Final Report, Maintenance and Equipment Evaluation of the US Army Floating Aircraft Maintenance Facility No. 1 (USNS CORPUS CHRISTI BAY, T-ARVH-1, Silver Spring, MD, 15 June 66, pp. III-3-6.

compared the FAMF and a comparable land-based facility. The third report, which appeared on schedule in September 1966, covered the first five months of the FAMF's operations in Vietnamese waters and discussed a second FAMF.

The APJ report was even more pro-FAMF than its VITRO predecessor. Not only did the APJ report praise the FAMF's management, but it also found the FAMF to be superior to a comparable land-based facility in nearly every respect. The FAMF's advantages included mobility, self-contained utility support, and relative indifference to environmental factors. The only real FAMF disadvantages found by the study were the periodic need to go off-station for ship maintenance and the physical limitations to shop space.¹⁹⁸

The APJ report had one other significant aspect. This was its economic comparison, which listed both the cost savings achieved by the FAMF-1 and the potential cost advantages of a FAMF-2:

According to the report, the FAMF-1 generated \$11.9 million per year in savings. These savings consisted of \$2.9 million for the transportation cost of reparable not sent to the CONUS; \$6.6 million for the actual CONUS overhaul costs avoided; and \$2.4 millions for transportation costs saved by means of the FAMF's test/inspect facility. Moreover, the FAMF featured a one-time savings of \$25.8 million for the Vietnam logistics pipeline. The APJ deduced this figure by reckoning that, since the FAMF was able to

¹⁹⁸APJ, Final Report, Cost and Effectiveness Evaluation of the Floating Aircraft Maintenance Facility, Ridgefield, New Jersey, Sep 66, pp. S-14-15, 6-15.

do 10.2 percent of all Vietnam aviation reparable work,¹¹⁹ it should save \$25.8 million, or 10.2 percent, of the \$253.3 million aviation reparable pipeline cost.²⁰⁰

Evaluation Aftermath

Neither the VITRO nor the APJ studies led to more FAMF's, but they did produce three significant results:

First, and most importantly, they created an increased awareness of the FAMF within the Army community. This awareness came about from the wide participation required by the FAMF studies, a participation shown by any list of attendees at any of the three²⁰¹ major FAMF study conferences held early in 1966.²⁰² This participation must have had some influence on Army-wide thinking, pro or con. It might, for example, help to explain the CG, MOCOM's, July 1966 proposal to spend \$750,000 to study

¹⁹⁹Ibid., p. 5-6. APJ calculated that the FAMF provided 35,000 of the 342,200 man-hours needed per month in Vietnam aviation repair work.

²⁰⁰Ibid., pp. S-12-13, 5-6-7.

²⁰¹There were three FLAT-TOP feasibility conferences held in the first half of 1966: at Louisville, Kentucky, 1-2 March 1966; at Peoria, Illinois, 18-20 April 1966; and at Atlanta, Georgia, 7-9 June 1966.

²⁰²The 19-20 April 1966 FLAT-TOP Conference in Peoria, for example, drew representatives from the BUSHIPS, the CDC, the AMC, all of the AMC's commodity commands, and the AMB. (1) MFR, COL John F. Sullivan, PM, FLAT-TOP, 20 Apr 66, Subj: Summary of FLAT-TOP Feasibility Studies Conference, Part I (19 April 1966). (2) MFR, COL John F. Sullivan, PM, FLAT-TOP, 25 Apr 66, Subj: Summary of FLAT-TOP Feasibility Studies Conference, Part II (20 April 1966).

the conversion of an LST for the repair and overhaul of MEC equipment.²⁰³

Second, the APJ and VITRO studies set several economic guidelines that would be employed by FAMF proponents in the future. Of particular importance were the FAMF's manhour out-put and workload share, the logistics pipeline savings, the transportation savings, and the FAMF's replacement costs. Some of this data would be altered later, but the original figures were usually accepted as starting points.²⁰⁴

Third, and finally, the APJ and VITRO studies seemed to act as stimuli for a rash of new study proposals. Even while its study was in progress, for example, the APJ was preparing a year-long follow-on effort to summarize performance data, develop additional FAMF concept application studies, and search for alternative FAMF modes.²⁰⁵ The APJ's proposal did not win FLAT-TOP PMO acceptance, but this did not discourage further similar attempts.

One reason for further APJ optimism, aside from its long-term FAMF relationship, was the PMO's pro-study attitude. While rejecting this one particular APJ proposal as too vague on the one hand, the PMO was suggesting

²⁰³MFR, Mr. S. C. Lenic, Assistant for Materiel, AMCPM-FL, 21 July 66, Subj: Method of Funding for the Conversion of the LST-MEC Study, \$750,000.

²⁰⁴For example, the FLAT-TOP rejected a later APJ follow-on study proposal on the grounds that it would add nothing new: Ltr, LTC Robert A. Filby, Ch, FLAT-TOP Field Ofc, to Proj Mgr, FLAT-TOP, 11 Jul 66, Subj: American Power Jet Proposed Statement of Work.

²⁰⁵Ltr, Mr. George Chernowitz, Dir, APJ, to LTC Robert A. Filby, Contracting Officer's Rep, Project FLAT-TOP Control Center, 3 Jun 66, Subj: [Contract No. DA 23-204-AMC-03933(T)].

a \$342,000 study contract to the DA on the other. This proposal called for a lengthy investigation of the non-aircraft repair portion of DA's 17 February 1966 - directed study.²⁰⁶ The DA had to disapprove this proposal on funding limitations, but that action only had the effect of turning this and subsequent FAMF studies to Army in-house resources.

Multiple FAMF Studies

DA Re-Direction

The 17 February 1966 DA-directed study, the first multiple FAMF study, continued on beyond its original 15 September 1966 termination date. The main reason for this continuation was probably the PMO's prodding, which made the study grow into an enormous set of work packages that required more man-hours than the contributing commodity commands could provide. The PMO thus created an excuse to take the first expansion step, a 14 June 1966 request to the DA for contractual aid to complete the work packages.²⁰⁷

The DA, as noted earlier, refused the request, directing the study back into in-house channels on 13 October 1966. The DA also took this

²⁰⁶MFR, Mr. S. C. Lenic, Asst for Mat'l, PROJECT FLAT-TOP, 28 Apr 67, Subj: Completion Date of Feasibility Study for Floating Maintenance Facilities for Maintenance of Army Materiel other than Aircraft - RCS CSGLD-1375.

²⁰⁷MFR, Mr. S. C. Lenic, Asst for Mat'l, PROJECT FLAT-TOP, c. 12 Jan 67, Subj: Summary of Conference - FLAT-TOP Feasibility Study, 10-11 January 1967.

occasion to reduce the study's scope. The new outlines narrowed the investigation to two floating facilities, one for electronic equipment and components, the other for mechanical equipment and components. A modified Combat Service to the Army (COSTAR) GS Maintenance Battalion was to serve as the organizational unit for base planning for the two ships.²⁰⁸

At this point the DA re-directive split the FAMF Fleet story into two channels. In the main, and longer-running course, the FLAT-TOP PMO continued to press for FAMF-II, a vessel to be converted for airframe repairs. In the new branch channel opened by the DA, the FLAT-TOP PMO plunged into a slightly more than year-long effort to secure two other FAMF's. One was variously known as the Floating Electronics Maintenance Facility (FEMF), as the Floating Army Maintenance Facility - Electronics (FAMF-E), or more simply as the FAMF-III. The second ship also had more than one designation, being called either the Floating Army Maintenance Facility - Mechanical Materiel (FAMF-M), or the FAMF-IV.

Study Tasking

The FLAT-TOP's main problem was now study completion. It had the DA's study guidelines; it had the DA's refusal to let the study be contracted; and it had inadequate resources to do the study itself. To the FLAT-TOP, the

²⁰⁸Msg, CG, USAMC to CG, MICOM, 29 Dec 66, Subj: Feasibility Study, Floating Maintenance Facilities for Army Materiel other than Aircraft.

only feasible solution was to divide the study into two parts and to farm out each part.

The first step in the solution was to call a 10-11 January 1967 study feasibility conference at Corpus Christi, Texas. Conference attendees included representatives of the FLAT-TOP, the MICOM, the ECOM, the MUCOM, the United States Army Ammunition Procurement and Supply Agency (APSA), and the United States Army Tobyhanna Army Depot (TOAD). The conference topic was a decision on the course of action to be taken on the feasibility study.²⁰⁹

The conferees decided that most of their attention should go to the FAMF-III. There were two reasons for this decision. First, limited in-house resources precluded a high degree of study concentration upon more than one subject. Second, the FAMF-III seemed to be the most promising target. It offered high trade-offs, significant operational combat support, operational availability of high-density and costly equipment, and large pipeline savings. Accordingly, the conference participants decided that five FAMF-III actions were necessary: one, to develop an electronics workload for a floating facility; two, to determine that test, calibration, production and special tooling necessary; three, to prepare shop layouts; four, to ascertain the direct labor strength required; and, five, to determine the skill levels needed.²¹⁰ The ECOM was to receive the FAMF-III study task.²¹¹

²⁰⁹MFR, Mr. S. C. Lenic, c. 12 Jan 67, 10-11 January 1967 Conference, ref. cit.

²¹⁰Ibid.

²¹¹Paper, Mr. S. C. Lenic, Asst for Mat'l PROJECT FLAT-TOP, c. 12 Jan 67, Subj: Study Task Assignments and Objectives.

FAMF III Study

Preliminaries

The FLAT-TOP PMO, of course, had to solicit AMC Command help to ensure ECOM execution of the FAMF-III study. The PMO, however, was so sure of this support that it immediately began conversion preliminaries. These preliminaries included the establishment of approximate FAMF-III shop and office space requirements,²¹² the selection of a candidate FAMF-III ship, the USNS Tranquillity (AH-14), and the determination of a \$4-5 million conversion cost for the Tranquillity, less production tools and the test equipment expenses.²¹³

The PMO next requested a survey of the Tranquillity, then riding at anchor in the James River Reserve Fleet.²¹⁴ Extensive coordination followed, with the PMO making the necessary arrangements for ECOM survey participation.²¹⁵ The ECOM agreed, on 28 February 1967, to

²¹² Draft, Tobyhanna Army Depot, c. 10 Feb 67, Subj: Preliminary Shop and Space Requirements for FEMF (Tobyhanna).

²¹³ (1) Ibid. (2) Ltr, LTC John L. Gardner, DPM, FLAT-TOP, to COL John F. Sullivan, PM, FLAT-TOP, 19 Jan 67, Subj: [FAMF-III Information].

²¹⁴ Msg, CG, AMC, to CG, ECOM, 15 Feb 67, Subj: Floating Electronic Maintenance Facility.

²¹⁵ MFR, Mr. Elmo M. McKinney, Asst for Progs, PROJECT FLAT-TOP, 24 Feb 67, same Subj.

participate²¹⁶ and the PMO set the survey dates²¹⁷ for 8-9 March 1967.²¹⁸

The Tranquillity survey followed, on 8-10 March 1967. The survey party consisted of seven civilians, representing the FLAT-TOP PMO, the ECOM, the TOAD, and the AMC Special Projects Office (SPO) at Norfolk. The party thoroughly investigated the Tranquillity's hull, interior and exterior areas, and engineering plant.

The party concluded that the Tranquillity was an excellent conversion candidate. The ship appeared to be in good order, apparently needed few alterations to receive electronic equipment, and offered much more space than the CCB. The party estimated that the Tranquillity could be converted in 10 to 12 months time at a cost of about \$8 million, less production tools and equipment.²¹⁹

ECOM Study Tasking

The completed Tranquillity survey served as an introduction to the ECOM tasking effort. On 16 March 1967, using the survey as a basis, the PM proposed a briefing for the FAMF-III study to

²¹⁶Msg, CG, ECOM, to CG, AMC, 28 Feb 67, same Subj.

²¹⁷Msg, CG, AMC, to CG, ECOM, 27 Feb 67, same Subj.

²¹⁸MFR, Mr. S. C. Lenic, Asst for Matl, PROJECT FLAT-TOP, 2 Mar 67, Subj: ECOM visit to the USNS TRANQUILLITY, James River Reserve Fleet, 8-9 March.

²¹⁹MFR, Mr. S. C. Lenic, Asst for Matl, PROJECT FLAT-TOP, 14 Mar 67, Subj: Summary of the Results of the Technical Survey Performed aboard the USS TRANQUILLITY (AH-14) James River Reserve Fleet during 8-10 March 67.

the CG, ECOM and to those affected parties on the ECOM staff.²²⁰

The ECOM was in accord with this proposal, and the briefing took place on 29 March 1967. The briefing presented the DA and the AMC study positions, the study status, and planned study actions.²²¹

On 18 April 1967, the CG, AMC, took the next step in ECOM - tasking, directly requesting the CG, ECOM, to do the study. The AMC Commander noted past ECOM FAMF-III support, especially the determination of those electronics components, end items and assemblies that would be likely candidates for shipboard maintenance and overhaul. The Commander then asked the ECOM to complete its work by conducting a cost effectiveness analysis, making contingency employment trade-offs, weighing conceptual advantages and disadvantages, selecting tools and test equipment, defining work skill levels, preparing a ship layout, and picking a ship hull. The Commander concluded by requesting a study completion schedule.²²²

On 2 May 1967, the MG William B. Latta, CG, ECOM, replied to the AMC Commander that he would be glad to undertake the study. He noted, however, that he would have to contract part of it. He also remarked

²²⁰Ltr, COL John F. Sullivan, PM, FLAT-TOP, to CG, ECOM, 16 Mar 67, Subj: Proposed Briefing on Feasibility Study - Floating Electronics [sic] Maintenance Facility (FEMF).

²²¹Msg, CG, ECOM, to CO, TOAD et al., 24 Mar 67, Subj: Briefing on Feasibility Study for Floating Electronics Maintenance Facility (FEMF).

²²²Ltr, GEN Frank S. Besson, Jr., CG, AMC, to MG W. B. Latta, CG, ECOM, 18 Apr 67, Subj: [FAMF-III Feasibility Study].

that he would like to include a Depot Installed Maintenance Automatic Test Equipment (DIMATE) facility into the study's considerations.²²³

Anticipating MG Latta's reply, the FLAT-TOP PMO made full steam ahead. The PMO organized a study group, secured TOAD, SHAD and LBAD cooperation,²²⁴ fixed its conversion sights on the Tranquillity, and denounced barge consideration as a "jack leg" operation.²²⁵

The PMO believed that a converted Tranquillity could hold about 500 people, including the MSTs crew,²²⁶ that it could, for the sake of Army operation, use Army rather than Navy, electronic gear;²²⁷ and that its feasibility study phase could, with close supervision, be completed by December 1967.²²⁸

223

Ltr, MG W. B. Latta, CG, ECOM, to GEN Frank S. Besson, Jr., CG, AMC, 2 May 67, [same Subj.].

224

Ltr, LTC John L. Gardner, DPM, FLAT-TOP, to LOG/MM-PPB, DCSLOG, 27 Apr 67, Subj: Floating Maintenance Facilities for Maintenance of Army Materiel Other than Aircraft.

225

MFR, Mr. S. C. Lenic, Asst for Mat'l, 10 May 67, Subj: Floating Electronic Maintenance Facility - "FEMF".

226

Fact Sheet, Mr. Samuel S. Kirschner, Act Ofc, FLAT-TOP DMR, Dep for Maint, Mat'l Readiness Dir, ECOM, 17 Mar 67, Subj: Feasibility Study for the Floating Electronics Maintenance Facility (FEMF).

227

Ltr, CMDR, Naval Ship Sys Cmd, to CG, AMC, 29 May 67, Subj: Army Communication Requirement Project Flat-Top, Electronic Requirements.

228

(1) DF, Mr. Lloyd K. Burkholder, Actg Ch, Log Spt Div, FLAT-TOP PMO, to Mr. B. Kirschner, ECOM, 8 Jun 67, Subj: FLAT-TOP. (2) Memo, Mr. Lloyd K. Burkholder, Integd Log Spt Div, to Ch, FLAT-TOP Field Ofc, c. 17 Jun 67, Subj: Trip Report Covering Trip to Fort Monmouth, New Jersey, and Project Manager's Office, 13-16 June 1967.

RCA Contract

On 26 June 1967, the feasibility study formally got underway with the award of a contract to the Radio Corporation of America (RCA). Worth about \$180,000, the contract required the RCA to complete the feasibility study in four-and-one-half months,²²⁹ or not later than 24 November 1967.²³⁰ In order to hold study costs down, the RCA was to use in-house data and to cooperate closely with in-house personnel.²³¹

On 19 July 1967, this cooperative effort got underway with a meeting between contractor and Army personnel. The PMO hosted the meeting, with attendees representing the ECOM, the RCA, the ATAC, the WECOM and the MICOM. The purpose of the meeting was to discuss the FAMF-III's proposed concept of operation and to finalize the RCA's study ground rules.

The meeting's chief result was the establishment of six major RCA study directives. These six were: first, base the ship's

²²⁹ (1) DF, Mr. S. Kirschner, ECOM to Mr. Lloyd Burkholder, FLAT-TOP, PMO, 27 Jun 67, same Subj. (2) Ltr, MG W. B. Latta, CG, ECOM to GEN Frank S. Besson, CG, AMC, 11 Aug 67, same Subj.

²³⁰ Ltr, LTC H. B. Blanchard, Jr., DPM, FLAT-TOP, to Mr. Kirschner, AMSEL - MR - NMP, ECOM, 30 Jun 67, Subj: Floating Maintenance Facilities for Maintenance of Army Materiel other than Aircraft (Electronic Equipment), w/1st Ind, Mr. R. P. Iannarone, Asst Adm Ofcr, ECOM, to AMCPM-FL, 30 Jun 67, same Subj.

²³¹ Latta ltr, 11 Aug 67, ref. cit. The subsequent history and speed of execution of the RCA contract was indicative of just such close contractor - Army cooperation.

feasibility and justification on Army requirements; second, design the ship primarily as a maintenance facility; third, establish personnel training requirements for the ship's maintenance personnel; fourth, recommend a technical data storage, retrieval and display system for shipboard operations; fifth, develop budget estimates for various automated and manual equipment mixes on the ship; and, sixth, provide the ship with an avionics repair capability. The ECOM also received a special study task, the selection of a primary and a secondary CONUS facility as a "mother" agency for the FAMF-III.²³²

The ECOM kept the ensuing study under careful watch. This supervision included the solicitation of the other AMC commodity commands for reviews of their electronic items and systems as workloading candidates,²³³ the conduct of three study in-process reviews (IPR's);²³⁴ and the convocation of a final study review.²³⁵

²³²MFR, Mr. G. L. Bupp, Prog Anal, FLAT-TOP PMO, 19 Jul 67, Subj: Feasibility Study for the FAMF-III (Electronics Maintenance Facility). Meeting with ECOM and RCA personnel.

²³³Ltr, Mr. R. P. Iannarone, Asst Admin Ofcr, ECOM, to Mr. W. L. Crump, AMSMI-SMED, et al., 15 Aug [67], Subj: Floating Army Maintenance Facility (FAMF-III) Additional Data.

²³⁴(1) Memo, Mr. Joseph E. Lidiak, RCA, to Mr. W. Gardner, FLAT-TOP PMO, 2 Aug 67, Subj: Agenda - Third In-Process Review, FEMF Study Program, 28 September 1967. (2) DF, Ch, FLAT-TOP Field Ofc, to PM, FLAT-TOP, 17 Oct 67, Comments Concerning In-Process Review Conference, 27-29 September 1967.

²³⁵Paper, HQ, ECOM, c. 1 Nov 67, Subj: ECOM Review.

Thanks to this ECOM monitorship, a FAMF-III concept of operations draft was ready by 22 August 1967, an implementation plan by 1 October 1967, and the study itself by 22 November 1967, three days ahead of schedule.²³⁶

RCA Study

The RCA FAMF-III study was strongly favorable to the electronic maintenance ship concept. The study concluded that the FAMF-III was physically feasible, that it was deployable within 19 months, and that it could save the Army from \$155 to \$284 million over its projected 15-year life. The study recommended that the FAMF-III be converted and that it be equipped with the latest computer equipment to maximize savings.

The study hedged its pro-FAMF stance on five variables. These five were: first, that the FAMF-III be operational and on-site 19 months after its authorization; second, that the PMO get both such an authorization and monies to support it; third, that the FAMF-III operate 15 years; fourth, that the Army furnish the FAMF-III a home depot; and, fifth, that the ECOM provide the ship with the necessary electronics maintenance equipment.²³⁷ Assuming

²³⁶ (1) RCA Draft, Concept of Operation, Project FLAT-TOP, Floating Army Maintenance Facility, Electronic Materiel, (FAMF #3), 22 Aug 67. (2) RCA, FAMF-III Implementation Plan, c. 1 Oct 67.

²³⁷ RCA, System Feasibility Study for the Floating Electronic Maintenance Facility: FAMF-III Final Report, 2 vols., Burlington, Massachusetts, 21 Nov 67, Vol. 1, pp. I-I-2.

that these variables all resolved in the FAMF-III's favor, the RCA stated that the ship could be fashioned upon a decommissioned C-3 submarine tender hull.²³⁸

The RCA's C-3 hull selection was not its first choice. It would have preferred a larger C-4 hull, but no C-4 hulls were available. The RCA did consider new C-4 hull construction, but this would have proved too costly and time consuming. The RCA therefore stayed with the C-3 hull, estimating that it could carry about 500 personnel (104 crew) and that it would cost approximately \$36.6 million to convert.²³⁹

On 24 November 1967, the CG, ECOM forwarded the RCA study to the PMO. The CG believed that the study met, within data limitations, all of the DA's 17 February 1966 study guidelines. The CG heartily endorsed the study, and he expressed his willingness to aid in FAMF-III implementation.²⁴⁰ On 12 December 1967, the CG

²³⁸The Navy had provided RCA with C-3 data based on the USNS Anthedon. The Anthedon thus constituted the study model. See: Ltr, Rear Admiral John M. Alford, Actg Comdr, MSTs, to Mr. Joseph E. Lidiak, RCA, 27 Oct 67, Subj: [USNS ANTHEDON Data].

²³⁹RCA, FAMF-III Study, op. cit., p. 1-2.

²⁴⁰Ltr, MG W. B. Latta, CG, ECOM, to AMCPM-FL, 24 Nov 67, Subj: Feasibility Study for Floating Electronics Maintenance Facility.

repeated his endorsement and his offer of further assistance to the
CG, AMC.²⁴¹

FAMF-IV Study

Tasking and Study

The FAMF-IV study was concluding about the same time as the FAMF-III. The IV study never received the attention of the III, and it was strictly an in-house effort by the ATAC. The ATAC was, however, able to compensate for its lack of contractual support by securing the cooperation of the MOCOM and the WECOM.

The FAMF-IV study actually began, as had its sister III study, with a directive letter from the AMC Commander. On 9 May 1967, GENERAL Besson, CG, AMC, requested MG Lapsley, CG, ATAC, to complete the mechanical equipment ship feasibility study. As with the ECOM III study, the ATAC effort was to include a cost effectiveness analysis, trade-offs, conceptual advantages and disadvantages, contingency and peacetime employment, and CONUS impact.²⁴²

The ensuing ATAC effort ran on an even tighter schedule than the ECOM's. Starting almost one month later, the ATAC study was due by 28 November 1967, four days after the ECOM due date. The purpose

²⁴¹Ltr, MG W. B. Latta, CG, ECOM, to GEN F. S. Besson, Jr., CG, AMC, 12 Dec 67, [same Subj:].

²⁴²Ltr, GEN F. S. Besson, Jr., CG, AMC, to MG W. W. Lapsley, CG, ATAC, 9 May 67, Subj: [FAMF-IV Study].

of this scheduling was to permit the PMO to coordinate and forward both studies to the DA by 1 December 1967. The TACOM responded favorably, beating its deadline by three days with a 25 November 1967 submission to the AMC.²⁴³

The core of the IV study was a detailed economic comparison of the operations of a FAMF-IV against two similar facility competitors, one in the CONUS, the other in the overseas theater of actions. The results of this comparison were two-sided. On one side, the FAMF initially cost most of all, as these figures show:

<u>Item</u>	<u>FAMF-IV</u>	<u>CONUS Facility</u>	<u>Overseas Facility</u>
Investment	\$13.2*	\$ 0	\$11.1
Ship Conversion or Site Construction	7.8	0	5.9
Annual Operating Cost	12.3	20.4	10.6
Second Destination Transportation	1.3	5.6	1.3
Personnel Cost	3.7	7.9	2.8
Totals	<u>\$38.3</u>	<u>\$33.9</u>	<u>\$31.7</u>

* Figures given in millions.

On the other side, the FAMF presented a median post-conversion yearly cost of \$30.5 million, \$2.8 million less than the CONUS Facility and \$4.7 million more than a constructed overseas facility.

The ATAC dismissed these mixed figures as inconclusive. It decided, instead, to base its judgements upon considerations "...not readily convertible [sic] to a monetary value," such as logistical roles and tactical and strategic flexibility. In this approach,

²⁴³Ltr, MG Shelton E. Lollis, CG, ATAC, to CG, AMC, 25 Nov 67, Subj: Floating Maintenance Facilities for Maintenance of Army Materiel other than Aircraft (Mechanical Equipment).

the FAMF-IV won easily, because it offered greater mobility and deployment potential, improved operational readiness potential, more self sufficiency, and more security. Such assumptions were all debatable; more security, for example, presupposed that the U. S. Navy would have absolute control of the seas in any area of deployment.²⁴⁴

Ship Selection

The remainder of the ATAC study was devoted to ship selection. Again using the FAMF-I as a basis, the Feasibility Study Task Force selected three C-3 submarine tender hulls as conversion candidates. The three hulls belonged to sister ships laid up at Jones Point, New York. The ships were: the USS Anthedon (AS-24), the USS Apollo (AS-25), and the USS Clytie (AS-26). The ships, of World War II origins, had been turned over to the MARAD by the Navy just after the war ended. The study recommended converting one of the ships and homeporting it at Mobile, Alabama, under the depot supervision of the Red River Army Depot, Texarkana, Texas.²⁴⁵

In addition to these three ships, there was another conversion possibility offered by an extra-ATAC quarter. In November 1967,

²⁴⁴ FLAT-TOP Project Office, TACOM, Project FLAT-TOP Floating Army Maintenance Facility, Mechanical Materiel, Short Title: FAMF-M, Feasibility Study, Warren, Michigan, 28 Nov 67, pp. 3-5.

²⁴⁵ Ibid., p. 53.

Mr. V. Raymond Branch of the AMC SPO at Norfolk²⁴⁶ investigated two ships, the USNS D. C. Shanks and the USNS George W. Goethals, both laid up at Thompkins Cove, New York. The Shanks proved inadequate, but the Goethals seemed worthy to both Mr. Branch and the PMO.²⁴⁷

Mr. Branch had investigated the Goethals thoroughly. His work included a perusal of the appropriate MARAD documents²⁴⁸ and a visit to the Goethals.²⁴⁹ The PMO was so impressed that it recommended further study of the ship.²⁵⁰

Multiple - FAMF Studies Outcome

Initial Delays

Upon the receipt of the FAMF-IV study, the PMO began preparations to implement the FAMF fleet concept at DA level. The first step in these preparations took place on 30 November 1967, when

²⁴⁶The same Mr. Branch who had been so instrumental in securing the CCB.

²⁴⁷Ltr, Mr. R. E. Callahan, Coordinator, FLAT-TOP PMO, to Mr. Ray Branch, AMCPM-FL-FOV, 8 Dec 67, Subj: Booklet of General Plans for MSTs Transport D. C. Shanks.

²⁴⁸Ltr, Mr. C. J. G. Wentz, Dist Ship Ops Ofcr, MARAD, New York, New York, to Mr. V. R. Branch, AMC SPO, 31 Oct 67, Subj: [USNS GEORGE W. GOETHALS], w. 2 Incls, MSTs Activation Specifications and Nov 59 Ship Survey Report.

²⁴⁹MFR, Mr. Victor R. Branch, AMC SPO, 29 Nov 67, Subj: USNS Transport Goethals.

²⁵⁰DF, LTC H. B. Blanchard, Jr., DPM, FLAT-TOP, to Ch, FLAT-TOP Fld Ofc, 7 Dec 67, Subj: Candidate Vessel for Use as FAMF-IV.

the PMO prepared a letter of transmittal for the III and IV studies to the DA for the CG, AMC's, signature.²⁵¹ The next step was the conduct of a Pre-Implementation Planning Conference at Corpus Christi, Texas, on 12-13 December 1967. Attendees from the ECOM, the TACOM and the PMO met on this occasion to discuss those FAMF actions to be taken when the DA approved the feasibility studies.²⁵²

The DA would never approve these studies. This, however, was not apparent at this time, and it would not become so for months. What was apparent was the start of a series of vexing delays, always for more information. These delays began almost immediately after the AMC's 14 December 1967 dispatch of the studies to the DA.²⁵³

The AMC itself began the delays. On 28 December 1967, the PMO notified the CG, ECOM, that some follow-on data was needed by the DCG, AMC, before the ECOM study could be submitted to the

²⁵¹DF, LTC H. B. Blanchard, JR., DPM, FLAT-TOP, to PM, FLAT-TOP, 30 Nov 67, Subj: Feasibility Study for Floating Army Maintenance Facility (Electronics), with 2 Incls, Summary of USATACOM Study and Summary of USAECOM Study.

²⁵²MFR, Mr. John B. Patrem, Ch, FLAT-TOP Fld Ofc, 14 Dec 67, Subj: Pre-Implementation Planning Conference (FAMF-E & FAMF-M).

²⁵³Ltr, AMCPM-FL to DA-DCSLOG (LOG/MPOD), 14 Dec 67, Subj: Feasibility Studies on Floating Army Maintenance Facilities (Mechanical) and (Electronics).

systems analysis staff at DOD level. This data was to include a more detailed discussion of the advantages that FAMF labor had over overseas land-based depot labor, a minute accounting of the operating costs of a FAMF-comparable CONUS depot, and an actual comparison of an electronic FAMF's operating costs against those of an overseas land depot. The DA also posed a series of questions that required more input, the most important of which was the consideration of the manner in which the FAMF-III would fit into a DA plan to establish mobile, quick-reaction, inventory control centers.²⁵⁴

This question was posed again by the DA, more pointedly. On 3 January 1968, the DA, acknowledging receipt of the studies, noted that they did not take into account its Plan for the Establishment of Quick Reaction Inventory Control Center (QRICC) Units. The DA told the AMC that this plan's considerations must be integrated into the report. If they were not, or not done so satisfactorily, the DA would task the CDC with the integration job.²⁵⁵

²⁵⁴Ltr, LTC H. B. Blanchard, Jr., DPM, FLAT-TOP, to CG, ECOM, 28 Dec 67, Subj: Feasibility Study of Floating Army Maintenance Facility (Electronics). As an interesting sidelight, the DA wanted the ECOM to put its highly-emphasized, contracted study into a format resembling the easier-to-understand TACOM in-house study.

²⁵⁵Ltr, LTC W. E. Hender, XO, Dir of Maint, ODCSLOG, to CG, AMC, 3 Jan 68, Subj: Feasibility Studies on Floating Army Maintenance Facilities (Mechanical) and (Electronics).

Final Side-Tracking

The AMC tried to supply the information to the DA,²⁵⁶ and quickly,²⁵⁷ but at this juncture the FAMF-III and the FAMF-IV studies became fatally entwined with the whole spectrum of DA floating facilities. On 1 May 1968, having ingested the inputs, the DA ordered the AMC then to consider all such facilities as a whole, to include a minimum of three ship configurations: fast deployment logistic ships, with roll-on, roll-off maintenance facilities; CCB-type maintenance ships; and floating machine shop-type barges, with group-level commodity equipment maintenance facilities. The DA gave the AMC only until 31 May 1968 to complete a feasibility study of all three configurations. The DA set this short deadline for possible FAMF PCR inclusion in the FY 1970 budget.²⁵⁸

The PCR was not forthcoming, elaborate AMC efforts to the contrary. These efforts included both the conduct, under DCSLOG Ad Hoc direction,

²⁵⁶ [FLAT-TOP PMO], Project FLAT-TOP Transition Study, Wash., D.C., 16 Jan 68.

²⁵⁷ The ECOM, for example, was asked to handcarry its input. See: Msg, CG, AMC, to CG, ECOM, 9 Jan 68, Subj: Feasibility Study of FAMF-E.

²⁵⁸ Msg, DA to CG, USAMC, CG, ECOM, and CG, TACOM, 1 May 68, Subj: Ad Hoc Conceptual Investigation of Floating Maintenance Facilities in Support of Initial Contingency Deployments.

of a preliminary Ad Hoc feasibility study meeting²⁵⁹ and the completion of a lengthy comparison of the relative merits of 32-, 15- and 9- barge maintenance complexes.²⁶⁰ The DA took all of the new data, then pocketed it on the grounds that the FAMF concept needed to be defined doctrinally before it could be expanded to commodities other than aircraft.²⁶¹

The DA decision was, in effect, the end of the FAMF-III and the FAMF-IV. The DA still remained unconvinced of the value of the FAMF-I itself, and it would not even accept a FAMF-II PCR until the AMC demonstrated both the effectiveness of the FAMF-I and the need for a FAMF-II.²⁶² The DCSLOG corroborated this situation to the PMO on 22 May 1969, stating that it would hold the III and IV studies until it approved the FAMF II PCR. As the DA never approved the FAMF-II, the FAMF-III and the FAMF-IV languished.

FAMF-II

First Proposal - Introduction

The FAMF-II proved worthy of the concern that the III and the IV lavished upon it, because it floundered for much the same reason as they did. That is, the DA was never really convinced of the value of the FAMF-I. Unlike the III and the IV, however, the FAMF-II came to the

²⁵⁹ (1) [Mr. Gardner, PMO?], Ad Hoc Conceptual Investigation of Floating Maintenance Facilities in Support of Initial Contingency Deployment, Tempo E Bldg, Wash, DC. 7 May 60 (2) LTC H.B. Blanchard, Jr., DPM, FLAT-TOP, Project Managers Weekly Significant Action Report, 27 Apr thru 3 May 68, Subj: [DCSLOG Ad Hoc Committee].

²⁶⁰ [?], [Maintenance Barges], [?], c. 31 May 68.

²⁶¹Ltr, AGSC-C LOG, to CG, AMC, 16 Sep 69, Subj: Floating Army Maintenance Facilities (FAMF).

²⁶²DF, LTC H.B. Blanchard, Jr., DPM, FLAT-TOP, to AMCSA-PM, 22 Nov 68, Subj: Project FLAT-TOP Charter.

very edge of conversion.²⁶³

The FAMF-II story began early. On 13 July 1965, even while the CCB was being converted in Charleston, the PMO was completing a draft FAMF-II PCR for OSD approval. The object of the PCR was the USS Curtiss (AV-4), a CCB sister ship. With Navy approval of the use of the ship in hand, the PMO proposed to spend \$17 million and 14 months to convert the Curtiss to do the same type of work as the CCB. The PMO set the following conversion dates: PCR approval, 1 October 1965; sea trials, 1 November 1966; DN final acceptance, 1 December 1966; and full operational readiness, 1 March 1967.²⁶⁴

CURTISS, Pre-Evaluation Phase

Operational Outlines

The Curtiss, the PCP object, was a ship survey survivor. On 21 July 1965, the AMC designated a six-man survey team to survey two ships, the USS Philippine Sea (AVT-11), an aircraft transport, and the Curtiss, both of which lay at anchor in Suisun Bay, California. The team's mission was to provide estimates of the time and the expense necessary to convert the ships into aircraft maintenance repair

²⁶³MFR, Mr. William H. Gardner, AMCPM-FL, 26 May 69 Subj: Studies on FAMFs 3 and 4.

²⁶⁴Program Change Proposal, [PMO, FLAT-TOP], c. 13 Jul 65, Subj: Second Floating Aircraft Maintenance Facility (FAMF #2) P.E. 7. 30. 44. 01.1.

facilities.²⁶⁵ The survey team completed its work on 28 July 1965.

The team's findings gave a clear preference to the Curtiss despite the Sea's time and cost advantages. These advantages showed that the Sea could be converted in six to eight months at a cost of between \$12 and \$15 million,²⁶⁶ while the Curtiss conversion would take 18 months and cost \$17 million. Discounting these factors, the team focused instead upon the Curtiss's superior condition and the possibility that it could be converted along the lines of its CCB sister. The team included a complete list of the Curtiss's shop and area locations in its report.²⁶⁷

Using the draft PCP and the survey as bases, the CG, AMC, dispatched a request for Curtiss conversion approval to the DCSLOG on 10 August 1965. The Commander cited three reasons for his request: first, a two-fold increase of Army aircraft strength in Vietnam since CCB conversion approval; second, Navy acquiescence in the Curtiss project; and third, flexibility in deployment of the additional facility. The Commander recommended that approval be given immediately so that the 12-month, \$17 million project could be included in the FY 1966 PEMA program.²⁶⁸

²⁶⁵Msg, CG, AMC, to CO, CHAD et al., 21 Jul 65, Subj: [Ships Survey].

²⁶⁶Sig Act Rept, LTC John F. Sullivan, PM, FLAT-TOP, c. 30 Jul 65, 26 thru 30 July 65.

²⁶⁷Ltr, LTC Robert A. Filby, Ch, FLAT-TOP Fld Ofc, to AMCPM-FL, 29 Jul 65, Subj: Survey of USNS CURTISS (AV-4) Seaplane Tender, w. 1 Incl [?], c. 29 Jul 65, Shop/Office Location, USNS CURTISS AV-4 (Proposed).

²⁶⁸Ltr, GEN F. S. Besson, Jr., CG, AMC, to DCSLOG, DA, 10 Aug 65, Subj: Proposed Additional Floating Aircraft Maintenance Facility (FAMF).

The Besson letter set off a flurry of PMO activity. Using the \$17 million figure as a starting point,²⁶⁹ and assuming DCSLOG approval, the PMO began programming a directed action leading to the FAMF-II's establishment.²⁷⁰ This action resulted in the development of a Curtiss PM₂P,²⁷¹ the submission of a R2 for the Curtiss's funding, the acquisition of \$.5 million for the preliminary Curtiss design work,²⁷² the draft of a concepts and guidance list for the Curtiss's conversion,²⁷³ and the conduct of a conference to decide the Curtiss's conversion requirements.²⁷⁴

OSD Decision

PCP Preliminaries. By October 1965, the Curtiss activity appeared to be culminating in a favorable OSD review. On 1 October 1965, the CG, AMC,

²⁶⁹ FONECON, Mr. C. A. Cotton, Ch, P&MM Div, FLAT-TOP Fld Ofc, to Mr. Lenic and Mr. Deangelo, PMO, 13 Aug 65, [same Subj.].

²⁷⁰ Msg, Ch, FLAT-TOP Fld Ofc, to CG, AMC, 20 Aug 65, Subj: [FAMF-II].

²⁷¹ (1) DF, LTC Carroll M. Cook, Jr., DPM, FLAT-TOP, to AMCPM-FL-FOT, 19 Aug 65, Subj: Development of PM₂P for USS CURTISS. (2) DF, LTC Robert A. Filby, Ch, FLAT-TOP Fld Ofc, to Mr. D'Angelo, AMCPM-FL, 24 Aug 65, same Subj.

²⁷² DF, LTC Carroll M. Cook, Jr., DPM, FLAT-TOP, to AMCPM-FL, 30 Aug 65, Subj: FY 66 Program Funding, PEMA, Project FLAT-TOP.

²⁷³ [Fact Sheet], [FLAT-TOP Fld Ofc?], c. 8 Sep 65, Subj: Concepts/Guidance, Development-AV-4.

²⁷⁴ (1) [Fact Sheet], [FLAT-TOP Fld Ofc?], c. 13 Sep 65, Subj: General Requirement for the Conversion of the AV-4 USS CURTISS to an Army FAMF. (2) Minutes of Meeting FLAT-TOP Fld Ofc, 13 Sep 65, Subj: Summary of Army Requirements for Conversion of USS CURTISS (AV-4) to FAMF. (3) Msg, CG, AMC, to Ch, Nav Opns, 2 Sep 65, Subj: [FLAT-TOP Conference].

anticipating such an outcome, pressed the BUSHIPS to provide more exact conversion time and cost data for the review, which was due not later than 5 November 1965. GENERAL Besson believed that, with this data, the conversion could begin in January 1966 and the Curtiss could be on-station by May 1967.²⁷⁵

GENERAL Besson got more than his data. On 7 October 1965, the CNO finally replied to Besson's 6 August 1965 letter, which had asked if either the Sea or the Curtiss was available. The CNO stated that, while the Sea was in contingency plans, the Curtiss was free. Moreover, two of the Curtiss's sister ships were also available, the USS Hamlin (AV-15), and the USS St. George (AV-16).²⁷⁶

The CNO letter had two immediate effects. The first occurred on 7 October 1965, when the PMO requested the MSTS to begin preparations to transfer the ship to the Army.²⁷⁷ The second followed on 13 October 1965, when the AMC forwarded the FAMF-II PCP to the DCSLOG.²⁷⁸

²⁷⁵Msg, CG, AMC, to Ch, BUSHIPS, 1 Oct 65, Subj: Proposed Activation of Second T-ARVH (USS CURTISS).

²⁷⁶Ltr, Vice-Admiral J. B. Colwell, DCNO (Fleet Opns and Readiness), to GEN. F. S. Besson, Jr., CG, AMC, 7 Oct 65, [same Subj.].

²⁷⁷Ltr, LTC John F. Sullivan, PM, FLAT-TOP, to CMDR, MSTS, 7 Oct 65, same Subj.

²⁷⁸Ltr, BG E. G. Hardaway, Comptr and Dir of Progs, HQ, AMC, to DCSLOG, DA, 13 Oct 65, Subj: Proposed Additional Floating Aircraft Maintenance Facility (FAMF).

PCP Funds. The FAMF-II PCP closely imitated the FAMF-I PCP's major request category, funding. The FAMF-II PCP provided \$17 million in FY 1966 PEMA funds for the Curtiss's conversion. This total was to be allotted as follows:

<u>Funding Area</u>	<u>Amount</u> (in millions)
Activation	\$ 3.5
Modernization	4.5
Reconfiguration	5.5
Production Capital	2.5
Equipment	
Outfitting	<u>1.0</u>
Total	<u>\$17.0</u>

The PCP also requested an additional \$2.5 million in FY 1967 PEMA funds. Of the extra sum, \$2.3 million was to be spent for more production equipment and \$.2 million for any post-operation modifications to such equipment.

PCP Personnel. The FAMF-II PCP did not follow its predecessor so closely in the other request category, personnel. The FAMF-II PCP made two significant departures in this area: first, the PCP did not ask for MSTTS spaces, since it included a provision to pay O&MA funds to the Navy to man the ship. Second, it increased the number of Army personnel requested, from 276 to 382. Of the 382 spaces, 360 were to be used to form the 3rd Transportation Corps Battalion (Aircraft Maintenance Depot) (Seaborne). The remaining 22 spaces were to be used to activate a Group Headquarters. This Headquarters would provide command and control for the two floating aircraft maintenance units.²⁷⁹

²⁷⁹ Program Change Proposal, DA, 13 Oct 65, Subj: Second Floating Aircraft Maintenance Facility (FAMF #2) P.E. 7.30.44.01.1.

PCP Outcome. There was no quick OSD decision on the FAMF-II PCP. The PMO, however, remained convinced of a positive outcome. Accordingly, without awaiting word from above, it prepared both a draft PM₂P,²⁸⁰ and an implementation plan for the Curtiss.

This latter action was the more complicated of the two, entailing a series of conferences at Corpus Christi. Beginning with the ARADMAC and the AVCOM on 27-29 October 1965,²⁸¹ these conferences went on to include representatives from the WECOM (1-2 November 1965), the MICOM (2-3 November 1965), the MUCOM (4-5 November 1965), and the ECOM (8-9 November 1965).²⁸² By scheduling the key participants first--the AVCOM and the ARADMAC--the PMO was able to prepare a draft plan by 1 November 1965.²⁸³

²⁸⁰ (1) DF, LTC John F. Sullivan, PM, FLAT-TOP, to AMCPM-FL-FOT, 11 Oct 65, Subj: PM₂P, Project FLAT-TOP. (2) DF, LTC Robert A. Filby, Ch, FLAT-TOP Fld Ofc, to AMCPM-FL, 22 Oct 65, [same Subj.], c. 1 Incl, draft PM₂P copy, dtd 21 Oct 65.

²⁸¹Msg, Ch, FLAT-TOP Fld Ofc, to CG, AVCOM, and CO, ARADMAC, 21 Oct 65, Subj: USS CURTISS Work Implementation Conference.

²⁸²DF, Mr. Herbert J. Lehn, Ch, Progs Div, FLAT-TOP Fld Ofc, to Ch, Pdn and Mat'l Mgmt Div, FLAT-TOP Fld Ofc., 25 Oct 65, Subj: Plans and Progress to Date - Preparation for the Work Implementation Conference with Commands.

²⁸³LTC John F. Sullivan, PM, Draft, United States Army Materiel Command Floating Aircraft Maintenance Facility: Implementation Plan, Project FLAT-TOP (T-ARVH-2), Wash., D.C., 1 Nov 65.

The PM₂P and the Implementation Plan actions symbolized the PMO's apparent conviction that both the \$17 million conversion cost²⁸⁴ and the March 1967 deployment date of the Curtiss would be met.²⁸⁵ The PMO's optimism on each count, however, was soon subject to challenge.

The BUSHIPS began to question the first count, conversion cost, even while the PCP was awaiting approval. On 6 November 1965, the BUSHIPS cautioned the AMC that preliminary studies had indicated that the Curtiss would cost far more, not less, to convert than the CCB had. The BUSHIPS cited three reasons for this cost re-estimation: first, the Curtiss's configuration was different from the Albemarle's in their pre-conversion states; second, the Curtiss required more work, specifically that needed to accommodate 84 more personnel than the Albemarle; and third, shipyard costs would be higher for the Curtiss. For these reasons, the BUSHIPS concluded, the Curtiss's conversion would cost more than \$14.5 million and it would require 24, not 12, months to convert.²⁸⁶ These conclusions²⁸⁷ drew strong, but unanswered, objections from the ARADMAC.

²⁸⁴DF, LTC John F. Sullivan, PM, FLAT-TOP, to AMCPM-FL-FOT, 11 Oct 65, Subj: USS CURTISS (T-ARVH-2), w. 1 Incl, Summary of Actions - USS CURTISS (T-ARVH-2), c. 11 Oct 65.

²⁸⁵DF, LTC John F. Sullivan, PM, FLAT-TOP, to AMCPM-FL-FOT, 7 Oct 65, same Subj:, w. 1 Incl, Project FLAT-TOP Milestone Schedule, USS CURTISS (T-ARVH-2), 7 Oct 65.

²⁸⁶Msg, BUSHIPS, to AMCPM-FL, 6 Nov 65, Subj: Proposed Conversion of USS CURTISS (AV-4).

²⁸⁷Msg, CO, ARADMAC, to BUSHIPS, c. 7 Nov 65, same Subj.

The PMO's second belief, that conversion would soon begin, received a stronger blow, a setback from the Joint Chiefs of Staff (JCS). On 20 November 1965, the JCS approved the FAMF-II PCP, but for the FY 1967, not the FY 1966, budget. Conversion could thus not begin in FY 1966, as the PMO had wished.²⁸⁸ On 7 December 1965, the OSD seconded this decision.²⁸⁸

Second Proposal - Curtiss, Evaluation Phase

OSD Reversal

The OSD decision's only ostensible result was to cause a seven-month delay in the Curtiss's conversion. In actuality, however, its ultimate effect was the cancellation of that conversion. This more deadly secondary effect was a by-product of the alternative format within which the OSD had cast its decision:

- a. Defer conversion of the USS CURTISS until greater operating experience has been gained with the first conversion, and
- b. Approve conversion of the USS CURTISS in the FY 1967 budget.²⁹⁰

²⁸⁸ Flash Report, PM, 22 Nov 65, Subj: JCS Approval - PCP, USS CURTISS.

²⁸⁹ Flash Report, PM, 9 Dec 65, Subj: OSD Subject/Issue on USS CURTISS PCP.

²⁹⁰ Ibid.

Although the OSD did chose "b", its postulation of "a" shows an interesting insight into its thinking. The OSD, it would seem, continued to have strong reservations about the whole FAMF concept. These reservations would soon lead the OSD to demand cost-effectiveness "proof" that the FAMF project could work successfully. Unfortunately for the PMO, the OSD would never get enough such "proof".

The OSD waited barely more than a week to revert to option "a". On 18 December 1965, it withdrew its approval of the deferred conversion, choosing instead to postpone a conversion decision until some operating experience had been gained from the CCB.²⁹¹ The OSD's decision meant, to the DA, a new FAMF study to determine the capabilities, limitations, and cost effectiveness of the FAMF-1, and a comparison of the actions of the FAMF-1 with those of a comparable land-based facility.²⁹²

APJ Study

Early Report Impressions. On 27 January 1966, the APJ received the contract for this study, which was to follow a long and troubled path. Consuming the

²⁹¹ Subject Issue No. 580-R, OSD, 18 Dec 65, Subj: Evaluation of the Second Floating Aircraft Maintenance Facility (FAMF #2).

²⁹² (1) Ltr, AGAO-CC LOG, DA, to CG, AMC, 20 Dec 66, same Subj. (2) CSM 65-628, 20 Dec 65, Subj: Evaluation of the Second Floating Aircraft Maintenance Facility (FAMF #2). (3) Ltr, BG Norman McKenzie, TAG, to CG, AMC, 28 Dec 65, same Subj: (4) Ltr, LTC John L. Gardner, DPM, FLAT-TOP, to SMOSM-PAIF, HQ, AVCOM, 21 Dec 65, Subj: Contract Study - Capability and Proficiency Evaluation of Project FLAT-TOP, w. 1 Incl. SOW.

February to September 1966 period, this study went beyond its original five-month FAMF-I evaluation objective. Not only did it compare the FAMF-I and a land-based facility, but it also weighed the FAMF-I against the Curtiss as a FAMF-II. During this long run, the study became the subject of both PM firing and Navy undermining.

The PM directed his criticism at the second of three incremental contractor reports. Deeming this report as "less than adequate", the PM attacked its analyses, errors, omissions, misleading statements, and inconclusiveness. Though the DCSLOG had approved this report, it had asked for clarification of several points,²⁹³ and the PM was worried about stronger JCS questions on the same points.²⁹⁴

The PM's fears proved well-based. On 19 August 1966, the DCSLOG asked the Commanding General, United States Army, Vietnam (CG, USARV), for answers and comments on this very report. Noting that the CG's replies would be included in its final FAMF-II evaluation, the DCSLOG proceeded to hit several sensitive points. These covered requests for

²⁹³ Summary Analyses, DCSLOG, DA, DSLOG Summary Analysis of the Phase II First Incremental Report of the APJ Report, "Cost and Effectiveness Evaluation of the Floating Aircraft Maintenance Facility (FAMF) #2, Wash., D. C., May 66.

²⁹⁴ Ltr, COL John F. Sullivan, PM, FLAT-TOP, to LOG/A (MR), DCSLOG, DA, 9 Aug 66, Subj: Evaluation of the Second Floating Aircraft Maintenance Facility (FAMF #2).

comments on the impact of the FAMF's periodic displacements, the various levels of support furnished by the FAMF, a comparison of FAMF and Red Ball effectiveness in clearing deadlined equipment, and, most especially, two points upon which it provided unsolicited remarks:

d. Trade-offs in terms of pipeline inventories, air transportation costs, aircraft availability and downtime rates and aircraft utilization. DCSLOG understands that practically all of the work received aboard the FAMF is generated by units supported by the 540th G. S. company; i.e., north of the facility. The 330th G. S. Co. is reported to have shown no interest in the facility. If the above is true, what if any is the difference in the availability of aircraft in units supported by the 330th G. S. Co. who have not used the FAMF as support and the units supported by the 540th G. S. Co. who do use the facility?

e. Advantages and disadvantages of the FAMF when compared to a land based facility. What shortfall would exist if in lieu of the FAMF additional G. S. companies were provided and/or additional capabilities provided the existing GS companies or both.

The DCSLOG concluded its message with a further request for any "...comments which either support or refute a requirement for a second FAMF...."

The PM was shaken. The DCSLOG had not only questioned all of his basic assumptions regarding the FAMF's advantages, but it had also hinted strongly that the FAMF could be adequately replaced by the addition of a few GS companies. So much for the FAMF as a depot. COL Sullivan noted angrily on a note attached to his information copy of the DCSLOG message:

Dirty Pool!

You can see the importance of collecting data and the proper dissemination. We don't have friends in all places.²⁹⁵

Naval Intransigence. However badly the DCSLOG had handled the APJ study issue, at least from COL Sullivan's view, the Navy was to give it an even worse time. The Navy's objections centered upon the PMO argument which held that, as the Curtiss was an Albemarle sister ship, the former could profit from the latter's conversion example, resulting in a cheaper and quicker conversion. The Navy countered that the Curtiss had significant differences, that the Army wanted more work on the Curtiss, and that therefore the Curtiss would cost much more and take much longer to convert. Upon each re-examination, moreover, Navy costs and conversion time rose.

²⁹⁵Msg, Mr. Guy F. Wickham, Dep Ch, Mat'l Maint Div, ADCSLOG (MR), DA, to CG, USARV, 19 Aug 66, Subj: Evaluation of the Floating Aircraft Maintenance Facility (FAMF) #1.

Although the Navy had voiced its objections to the PMO's conversion figures as early as 6 November 1965, it did not formally release its own figures until the 8 December 1965 appearance of Curtiss conversion plan.²⁹⁶ This plan listed \$22.2 million and 21 months as conversion needs. The BUSHIPS, however, did not even consider these plans as definitive. It therefore requested an ARADMAC conference to discuss the relationship of its study and Army requirements in order to arrive at more precise estimates.²⁹⁷ As a result of this conference, held on 20 January 1966,²⁹⁸ the BUSHIPS decided that it would cost \$22.2 million and take 24 months to convert the Curtiss.²⁹⁹

²⁹⁶Ltr, Ch, BUSHIPS, to AMCPM-FL, 5 Jan 66, Subj: CURTISS Conversion Plan, s. 1 Incl., BUSHIPS Study Plan for Proposed Conversion of CURTISS (AV-4), 8 Dec 65.

²⁹⁷Msg, BUSHIPS, to CO, ARADMAC, 31 Dec 65, Subj: Proposed Conversion CURTISS (AV-4).

²⁹⁸Msg, Ch, FLAT-TOP Fld Ofc, to BUSHIPS, 12 Jan 66, Subj: Proposed Conversion USS CURTISS (AV-4).

²⁹⁹(1) Ltr, Ch, BUSHIPS, to AMCPM-FL, 14 Feb 66, Subj: CURTISS (AV-4); Conference Report, forwarding of. With 1 Incl, Report of CURTISS Conversion Requirements Review Conference of 20 January 1966 with list of attendees. (2) Ltr, Ch, BUSHIPS, to CMCPM-L (sic), 3 Mar 66, Subj: Proposed Conversion CURTISS (AV-4), w. 1 Incl., BUSHIPS Study Plan for Proposed Conversion CURTISS (AV-4).

The PMO refused to accept these BUSHIPS estimates. He attempted instead to make a slight compromise, holding to his \$19.5 million cost figure while relaxing his 18-month conversion period to 20 to 28 months. Unfortunately for the compromise, the BUSHIPS time figures had meanwhile risen to 37 months.³⁰⁰

Study Submission. On 20 September 1966, with the PMO and the BUSHIPS still far apart, the APJ submitted its study.³⁰¹ This work, discussed earlier,³⁰² closely mirrored the PMO's views on the FAMF-II. It concluded, for example, that a second FAMF was necessary, that a FAMF was more economical upon redeployment, and that a second FAMF could be converted in about 16 months at a cost of not more than \$19.4 million.³⁰³

While the study may have been pleasing to the PMO, it did nothing to resolve PMO-BUSHIPS differences. These differences, instead, worked their way up to the Command level, where they emerged in a 31 October 1966 Besson letter. In this letter, GENERAL Besson urged his Naval opposite number to see if he could not use his influence to scale down the Navy time and cost conversion estimates.

³⁰⁰ Ltr, APCPM-FL, to DCSLOG/A(MR), DA, 31 May 66, Subj: Evaluation of the Second Floating Aircraft Maintenance Facility (FAMF #2).

³⁰¹ Ltr, Mr. Carl G. Schone, APJ, to LTC Robert A. Filby, FLAT-TOP Control Center, 20 Sep 66, Subj: [APJ 471-304 Study].

³⁰² See pp. 132-33.

³⁰³ APJ, Final Report, op. cit., pp. S-21-22.

GENERAL Besson's letter was more than a request; it was a plea. As the general wrote, "Jean Engler from Vietnam" needed the ship now. If this urgency meant anything, the general argued, "...this second ship [should be], if we are ever to get it, targeted for completion by the end of FY 68".³⁰⁴ In short, if the AMC couldn't get the ship in wartime, it never could get it.

Despite GENERAL Besson's proponency, the second FAMF-II proposal, now called a PCR, moved more slowly and made less progress than the first one had. The big stumbling block was BG Joseph Heiser, assisting at DCSLOG, who initially refused to approve the APJ Study. Without his approval, the FAMF-II PCP could not be submitted.

BG Heiser's objections were thorough. Not only did he cite the study's failure to provide the DA staff with more precise cost and manning data, but he also expressed a DCSOPS doubt that a requirement existed for a second FAMF.³⁰⁵ Almost two months passed before BG Heiser

³⁰⁴Ltr, GENERAL F. S. Besson, Jr., CG, AMC, to Vice Admiral I. J. Galantin, Ch of Naval Mat'l, DN, 31 Oct 66, Subj: [USS CURTISS Conversion Proposal].

³⁰⁵(1) MFR, Mr. S. C. Lenic, Asst for Mat'l, AMCPM-FL, 1 Nov 66, Subj: APJ Study Status. (2) Ltr, COL John F. Sullivan, CO, 1st Mat'l Gp, to BG Howard F. Schiltz, CG, AVCOM, 12 Dec 66, Subj: [FAMF-II Approval].

could be satisfied, a period that seemed to preclude any entry of the Curtiss conversion into the FY 67 Supplemental Budget. This delay led COL Sullivan both to muse about a conversion "now more up in the air than ever" and to speculate on the whole FLAT-TOP Project's going "out of business".³⁰⁶ Finally, however, the DCSLOG signed a summary sheet for the study on 14 November 1966.³⁰⁷

Naval Undermining. The DCSLOG's approval evidently broke the last FAMF-II barrier. Together with his go-ahead, the DCSLOG recommended that the DA staff prepare a formal FAMF-II PCR for the CSA's signature. This PCR was to address three DA staff interests: first, the need for a FAMF-II after Vietnam; second, firm FAMF-II cost and completion estimates; and, third, those factors in DS/GS maintenance which supported a need for a FAMF-II. By 28 November 1966, the staff had made enough headway on the PCR to win the VCSA's approval,³⁰⁸ which in turn caused the DCSLOG, on 6 December 1966, to program \$1.9 million in supplemental FAMF-II funds for FY 1967 and \$18.1 million for FY 1968.³⁰⁹

At this point, with all seemingly going well, the Navy scuttled the Curtiss. Vice-Admiral Galantin fired the charge, which was his

³⁰⁶Memo for GEN Besson, COL John F. Sullivan, PM, FLAT-TOP, 9 Nov 66, Subj: Updating of PM₂P, Project FLAT-TOP.

³⁰⁷Summary Sheet, ADCSLOG(MR), to CSA, 19 Nov 66, Subj: Evaluation of the Second Floating Aircraft Maintenance Facility (FAMF #2).

³⁰⁸Flash Report, PM, 30 Nov 66, Subj: Vice-Chief of Staff, Army Approval on FAMF #2, (USS CURTISS).

³⁰⁹Flash Report, PM, 6 Dec 65, Subj: Re-Establishment of Funding Program Support, FAMF 2.

reply to GENERAL Besson's letter requesting a reconsideration of the \$22.2 million, 37-month Curtiss conversion figures.³¹⁰ Admiral Galantin's reply confirmed the figures,³¹¹ an action which caused the OSD to advise the AMC that it would, if the three-year conversion time remained firm, almost surely not approve the Curtiss PCR.³¹²

Third Proposal - Currituck

Conversion Alternates

On 18 January 1967, Naval Ships (NAVSHIPS) Systems Command and PMO representatives met to decide what to do in the wake of the OSD decision. Their talks at first got nowhere, for the Navy stood firm on its unacceptable conversion time estimate. Then, almost at the conference's end, CPT W. J. Hussong, NAVSHIPS, asked if the Curtiss was the best and only ship for FAMF-II conversion. CPT Hussong suggested that either the USS Salisbury Sound (AV-13) or the USS Pine Island (AV-12) were available for FAMF-II use.³¹³

³¹⁰ See p. 146-47.

³¹¹ Ltr, Vice-Admiral I. J. Galantin, Ch of Naval Mat'l, DN, to GENERAL F. S. Besson, Jr., CG, AMC, 25 Nov 66, Subj: [USS CURTISS Conversion Proposal].

³¹² Flash Report, PM, 8 Dec 65, Subj: FAMF #2 Shipyard Time.

³¹³ MFR, Mr. Elmo M. McKinney, Asst for Progs, Project FLAT-TOP, 25 Jan 67, Subj: NAVSHIPS/AMCPM-FL T-ARVH-2 Ship Conversion Conference.

Following another CPT Hussong suggestion, the AMC checked its Curtiss actions³¹⁴ and, on 30 January 1967, formally queried the CNO regarding Sound and Island availability.³¹⁵ On 13 March 1967, the CNO replied, stating that Currituck would be available in June 1967 and that the Pine Island could also be used if the Army had a firm requirement.³¹⁶ The PMO thereupon began an immediate re-orientation of its already on-going PCR preparations,³¹⁷ submitting the preliminary Army requirements for the Currituck the same 13 March.³¹⁸

This third FAMF-II proposal, a PCR, seemed to be off in fine style. The Army had already, in anticipation of Currituck use approval, made two preliminary PCR steps. Both were successful; on the first, the Army obtained USARPAC concurrence in the use of its spaces to man the FAMF-II and USARV endorsement of the facility;³¹⁹ and, on the

³¹⁴Ltr, CMDR, NAVSHIPS, to AMCPM-FL, 6 Feb 67, Subj: Curtiss (AV-4); Conference Report, forwarding of, w. 1 Incl., Report of 27 January 1967 Conference on Conversion of Curtiss (AV-4).

³¹⁵Ltr, AMCPM-FL, to Vice-Admiral J. B. Colwell, CNO, 30 Jan 67, Subj: Request for Availability of USS Currituck and USS Pine Island.

³¹⁶Ltr, Vice-Admiral J. B. Colwell, CNO, to AMCPM-FL, 13 Mar 67, same subject.

³¹⁷MFR, Mr. Elmo M. McKinney, Asst for Progs, PROJECT FLAT-TOP, 8 Mar 67, Subj: Program Change Request (PCR).

³¹⁸Ltr, LTC John L. Gardner, DPM, FLAT-TOP, to CMDR, NAVSHIPS, 13 Mar 67, Subj: Preliminary Army Requirement for Conversion of the USS Currituck (AV-7) to a Floating Aircraft Maintenance Facility (T-ARVH-2).

³¹⁹(1) Msg, CINUSARPAC, to CINCPAC, 14 Mar 67, Subj: Second Floating Aircraft Maintenance Facility. (2) Msg, CG, USARV to CINCUSARCHAC, 16 Apr 67, Subj: Second Floating Aircraft Maintenance Facility (FAMF No. 2).

second, it got DOD approval of the office's Currituck modification plans. Suddenly, however, the old PMO-Navy differences popped up again. The PMO set a 17-month completion period for conversion, with the ship to be ready by 31 December 1968. The Navy countered, saying that the conversion would require a minimum of 36 months.³²⁰

Conversion Reconciliation

The Navy - PMO conversion struggle thus entered its third phase. This phase, though protracted, did produce a compromise. Unfortunately, by the time the compromise was reached, the conversion time issue was no longer the central OSD objection to the FAMF-II.

In the meantime, both sides drew up their lines. The Navy, after an initial 36-month estimate, first dropped to a conditional 30 months,³²¹ then rose to 40 months.³²² On the other side, the PMO set,³²³ and held to, an approximate 16-17-month conversion period.³²⁴ Finally, on 23 August 1967, the Navy offered, and the Army accepted, an approximate

³²⁰ DF, Mr. Walter M. Lorenz, Ch, Maint Ops Div, Dir of Maint, AVCOM, to Dir of Maint, AVCOM, 13 Mar 67, Subj: FAMF II.

³²¹ Memo for ASD (I & L), Mr. Graeme C. Bannerman, Asst Sec Navy, 8 Jun 67, Subj: Conversion of USS CURRITUCK.

³²² Ltr, Mr. Jamie Adair, D CMDR, Ship Acqns, NAVSHIPS, to Ch of Naval Mat'l, 23 Aug 67, Subj: Program Change Request, Second Floating Aircraft Maintenance Facility (A-7-011).

³²³ MFR, COL John F. Sullivan, PM, FLAT-TOP, 2 May 67, Subj: FAMF #2 Readiness Date.

³²⁴ FONECOM, Mr. Buncombe, PMO, to Mr. Herbert J. Lehn, Progs Div, FLAT-TOP Fld Ofc, 28 Jul 67, Subj: PCR Conversion Time - FAMF-2.

conversion time of 22 months and a rough cost of \$28 million.³²⁵

PCR Actions

Conversion estimates excepted, the PCR made good progress:

On the formal side, the PMO met the DA's ancillary PCR requirement for the conduct of a FAMF-II peactime use study.³²⁶ A study group met at the AVCOM, completed its work by 15 May 1967, and incorporated the resulting effort into the FAMF-II PCR as back-up justification. The PMO also settled the PCR's procedural format,³²⁷ coordinated the ship's budget levels and manning estimates with the MSTS,³²⁸ and prepared the ship's facility readiness date.³²⁹

The PMO also took several informal preparatory actions. These included the drafting of a Currituck Implementation Plan,³³⁰ the

³²⁵(1) MFR, Mr. G. L. Bupp, Prog Anal, PMO, 24 Aug 67, Subj: PCR FAMF-II. (2) Ltr, Mr. Jamie Adair, NAVSHIPS, 23 Aug 67, op. cit.

³²⁶MFR, COL John F. Sullivan, PM, FLAT-TOP, 8 Mar 67, Subj: FAMF Project Advisory Group Meeting, St. Louis, Mo., 7-8 Mar 67.

³²⁷MFR, Mr. Elmo M. McKinney, Asst for Progs, PMO, 15 Mar 67, Subj: PCR Planning.

³²⁸(1) MFR, Mr. G. L. Bupp, Prog Analt, PMO, 25 Aug 67, Subj: PCR FAMF-II. (2) Ltr, CMDR, NAVSHIPS, to AMCPM-FL, 14 Apr 67, Subj: USS CURRITUCK (AV-7); Conversion to T-ARVH.

³²⁹MFR, COL John F. Sullivan, PM, FLAT-TOP, 2 May 67, Subj: FAMF #2 Readiness Date.

³³⁰FLAT-TOP PMO, [Implementation Plan, USS CURRITUCK, AV-7], Wash., D. C., c. 23 May 67.

marshalling of FAMF-II equipment support,³³¹ and the initiating of Currituck transfer and conversion planning procedures.³³²

Thanks to its vigorous, or perhaps desperate, measures, the PMO was able to send the third FAMF-II PCR to the DA on 15 May 1967. This PCR had two key features: one, a low \$20 million cost; and two, a quick 16-month conversion time.³³³ After a rapid DCSLOG-CSA review, the PCR returned to the PMO on 18 May 1967 for several minor CSA-required changes. On 23 May 1967 the PCR went forward to the VCSA again.³³⁴

The third FAMF-II PCR had been carefully fabricated to overcome the one principal OSD objection to its predecessor: a long conversion time. This fabrication premise, however, proved to be questionable, for circumstances had altered the OSD's FAMF viewpoint in the months since the previous PCR submission. In this time, the

³³¹Ltr, Mr. John B. Patrem, Ch, FLAT-TOP Fld Ofc, to AMSWE-SMM-TE, 17 Mar 67, Subj: Equipment Support of FAMF-II.

³³²(1) These transfer and conversion plans included a visit to the Pine Island to study Naval decommissioning procedures and the initiation of actions to preserve the Currituck from mothballing. See: MFR, COL John F. Sullivan, PM, FLAT-TOP, 11 May 67, Subj: Evaluation Decommissioning Provisions, AV-12, USS PINE ISLAND. (2) DF, LTC H. B. Blanchard, Jr., DPM, FLAT-TOP, to PM, FLAT-TOP, 24 Jul 67, Subj: Disposition of USNS CURRITUCK Pending FAMF-II Approval.

³³³(1) Ltr, Mr. John B. Patrem, Ch, FLAT-TOP Fld Ofc, to AKPSH-EM, Ft. Sam Houston, TX, 15 May 67, Subj: Additional Floating Maintenance Facilities - Project FLAT-TOP. (2) Ltr, LTC John L. Gardner, DPM, FLAT-TOP, to Dir of Maint, HQ, AMC, et al., 15 May 67, Subj: Status, Second Floating Aircraft Maintenance Facility.

³³⁴MFR, Mr. Gordon L. Bupp, Proj Splt, PMO, 18 May 1967, Subj: Program Change Request - FAMF 2.

Army aviation logistics commitment to Vietnam had swollen, and the U. S. had been able to meet it without another FAMF. The FAMF concept was, accordingly, being placed in a competitive, rather than a unique position, and the FAMF-1's accumulating output data was not proving to the DA that it was so substantially cost-effective that another FAMF was needed.

It was within this changed framework that the third FAMF-II PCR entered the OSD grinder. On 4 August 1967, the PMO formally briefed the OSD on the PCR. This briefing had three principal features: one, a \$26.75 million conversion cost estimate; two, a 3.5 year FAMF-II repayment-of-itself determination; and, three, a suggested use of Naval facilities for a 17-month conversion period.³³⁵ The PMO supplemented this briefing with a later, and more detailed, list of agreements for the FAMF-II's efficiency, economy, and flexibility.³³⁶

PCR Rebuttal

Until the 4 August 1967 briefing, the PMO still believed that the OSD's main PCR objection was a more-than-two-year FAMF-II

³³⁵ [PMO], Outline: FAMF-II PCR Briefing to DOD, 4 Aug 67, Wash, D. C. c. 4 Aug 67.

³³⁶ Memo, LTC H. B. Blanchard, Jr., DPM, FLAT-TOP, to Mr. Turke, OSD, 17 Aug 67, Subj: Substantiation of the Requirement for FAMF-II.

conversion fixation.³³⁷ The OSD did continue to retain a strong interest in a quick conversion, but, on 19 September 1967, informal sources within the OSD informed the PMO that the OSD's new preoccupation was cost effectiveness. The OSD, it seemed, persisted in comparing the FAMF's cost effectiveness to that of a land-based depot. The FAMF, of course, came out second, the 1966 APJ study to the contrary.

The PMO tried to counter this OSD trend by swinging the OSD's attention toward the FAMF's mobility. On 19 September 1967, the DPM asked the Commander, AMC, to solicit the aid of LTG Engler, formerly the DCG, USARV, now the DCSLOG. LTG Engler was to cite his personal experiences with the FAMF.³³⁸ GENERAL Besson responded, dispatching the requested letter on the next day, 20 September 1967.³³⁹

Before anything more could be done, the OSD, on 30 September 1967, indefinitely deferred the FAMF-II PCR. The OSD based its decision on three major premises: first, it accepted the Navy's, not the PMO's, estimated conversion cost of \$30.9 million; second, it also accepted the Navy's estimated September 1969 conversion completion date, thus determining that a FAMF-II could not be

³³⁷ Ltr, LTC H. B. Blanchard, Jr., DPM, FLAT-TOP, to CO, 1st Mat'l Gp, 4 Aug 67, Subj: Briefing to DOD Action Group PCR for FAMF-II.

³³⁸ Summary Sheet, LTC H. B. Blanchard, Jr., DPM, FLAT-TOP, to CG, AMC, 19 Sep 67, Subj: PCR for FAMF-II.

³³⁹ Ltr, GENERAL F. S. Besson, Jr., CG, AMC, to LTG Jean E. Engler, DCSLOG, 20 Sep 67, same Subj.

on-station before March 1970; and, third, it found that the FAMF-1 spent \$3 million more annually to do the same amount of work as a comparable land-based facility. The OSD concluded that there must be a cheaper answer than the FAMF-II, and it set aside \$20 million in PEMA funds until the Army found such an answer.³⁴⁰

The OSD's third premise was the most galling element of the rejection, for it showed a continuance of OSD's skepticism towards the value of any FAMF. The PMO had included the APJ's Cost Effectiveness Study results in the PCR, and it had hoped that these results would show the OSD how well the FAMF-1 was working. The OSD, however, did not take this lead. Five operational months, it said, were not enough to consider FAMF-I results either conclusive or realistic; more study was needed.³⁴¹

As if this OSD decision was not a sufficient blow, the PMO next received a jolt from the DA. On 11 October 1967, LTG Engler, the DCSLOG, replied to the 20 September 1967 Besson letter. In his reply, LTG Engler notified GENERAL Besson that, because of "the funding situation prevailing this year,.... "the climate" was "not right" for "a successful reclama....at this time."³⁴²

³⁴⁰Flash Report, PM, 6 Oct 67, Subj: OSD Deferral of PCR for FAMF-II.

³⁴¹Briefg, COL Morgan C. Light, PM, FLAT-TOP, 20 May 69, Subj: Information Briefing, Project FLAT-TOP.

³⁴²Ltr, LTG Jean E. Engler, DCSLOG, to GEN Frank S. Besson, Jr., CG, AMC, 11 Oct 67, [same Subj.].

The Navy put the final cap to the third proposal. The NAVSHIPS returned the FAMF-II's preliminary MIPR for a Currituck list of reconfiguration requirements,³⁴³ and the CNO directed the Currituck's decommissioning.³⁴⁴

Fourth Proposal - AKV

Initiation

The twin OSD-DA blows did not sink the FAMF-II proposal, but they did send it into a drydock period. This period would last until the APJ could extend its FAMF-I cost-effectiveness study from five months to two years, a work begun with a 31 January 1968 contract award of about \$65,000.³⁴⁵ In the meantime, the PMO could reassess the situation. Vietnam notwithstanding, it had watched the OSD reject the third FAMF-II proposal, and the DA had seemed to be in no mood to object. Apparently the whole FAMF-II PCR approach had come undone, and either an abandonment or an overhaul was in order. As the Commander of the 34th General Support Group, on the occasion of an OSD exit briefing, wrote, Vietnam was doing very nicely without another FAMF, and the economic and strategic considerations of the theater

³⁴³Ltr, CMDR, NAVSHIPS, to CG, MECOM, 21 Nov 67, Subj: USS Currituck (AV-7); Conversion to T-ARVH, MIPR for.

³⁴⁴LTC H. B. Blanchard, Jr., DPM, FLAT-TOP, Project Manager's Weekly Significant Action Report, 9 thru 13 Oct 67, Subj: USS Currituck (FAMF-II).

³⁴⁵LTC H. B. Blanchard, Jr., DPM, FLAT-TOP, Project Manager's Weekly Significant Action Report, 29 Jan thru 2 Feb 68, Subj: Cost Effectiveness Analysis and Contingency Role of FAMF-I.

showed no need for the FAMF II.

The writer did, however, suggest that such a ship could be put to use elsewhere.³⁴⁶ The PMO did not agree, for it felt that such a view, if pursued, would prevent the deployment of the Currituck anywhere. The PMO based this belief on its conviction that, if Vietnam could not get it another FAMF, nothing could.

The PMO faced a dilemma. It wanted a FAMF-II, and it felt that Vietnam was necessary to get a FAMF-II, but the FAMF-II could not be another CCB. What, then, of a different kind of FAMF, such as the proposed FAMF-III, then drawing much attention?³⁴⁷

On 24 February 1968, the USARPAC posed this very question. Reaffirming the Vietnam requirement for a FAMF-II, the USARPAC suggested the use of a larger craft.³⁴⁸ This bigger ship would be able to make the airframe repairs so urgently needed after the February 1968 TET Offensive. The CCB, the USARPAC noted, did not have the capability to make these repairs. Moreover, the USARPAC

³⁴⁶Ltr, COL Luther G. Jones, CO, 34th Gen Spt GP (AM&S), to COL Morgan C. Light, CO, 1st Mat'l Gp (Log Spt) (Sbn), 22 Oct 67, Subj: [OSD Exit Briefing].

³⁴⁷Reprint, Mr. J. E. Lidiak, "Floating electronic maintenance facility," RCA Product Engineering, c. 10 Jun 68.

³⁴⁸USA Mat. Gp. No. 1, Historical Summary, 15 Jan 73, Annex A, op. cit., p. [80].

continued, the CCB had been so pressed by high priority commitments that it had not even been able to relocate during the offensive.³⁴⁹

AKV-Orientation

The PMO did not miss the opportunity presented to it by the USARPAC. The PMO quickly prepared a revised concept of operations for a FAMF-II. This concept called for a ship that could provide extensive GS airframe maintenance on a world-wide basis.³⁵⁰ The PMO complemented this action by drafting a new FAMF-II mission statement³⁵¹ and by deciding upon a FAMF-II hull plan.³⁵²

On 19 March 1968, the PMO's actions acquired formality. At that time, it received instructions from the AMC to submit another FAMF-II PCR to the DCSLOG. This PCR had a 1 May 1968 due date, and its subject was to be a FAMF-Airframe (FAMF-A).³⁵³

Rabaul Selection

The target of all this PMO activity soon came to be an AKV

³⁴⁹Draft PCR, [PMO], c. 1 May 68, Subj: Conversion and Activation of a 2nd FAMF.

³⁵⁰Draft, PMO, Concept of Operations: FAMF-A (Airframe), Wash., D. C., c. 6 Mar 68.

³⁵¹Draft, [PMO], Mission for FAMF-II (AKV-21 Aircraft Escort Carrier), Wash., D. C., 5 Apr 68.

³⁵²Briefing, COL Morgan C. Light, PM, FLAT-TOP, 4 Sep 68, p. 61.

³⁵³DF, LTC John Bergner, Ch, FLAT-TOP Fld Ofc, to Co, 1st Mat'l Gp., 19 Mar 68, Subj: TO&E for FAMF-A (Airframe).

(Cargo Ship and Aircraft Ferry), the USS Rabaul (AKV-21). The Rabaul was one of 12 Commencement Bay Class CVE's (Escort Aircraft Carriers) built in 1943-1945. After the war, the Rabaul and nine of its sister ships first became CVHE's (Helicopter Escort Aircraft Carriers), then AKV's. Displacing about 11,000 tons, or approximately 70 percent of the CCB's displacement, the Rabaul type of ship was chosen because it offered the open deck space necessary for airframe repair, yet did not require the operating expense and manpower of a larger, Essex Class Carrier.

The Rabaul emerged as the new FAMF-II candidate by elimination. On 19-21 March 1968, a delegation, including PMO representatives, inspected the USS Kula Gulf (AKV-8), a Rabaul sister ship.³⁵⁴ Inspections of the Rabaul and the Cape Gloucester (AKV-9), another sister ship, followed on 27-29 March 1968.³⁵⁵

On 5 April 1968, the PMO, deciding that it had seen enough, made its choice. It requested the CNO to make the Rabaul available for conversion.³⁵⁶ The AMC then, as per preliminary Naval

³⁵⁴ Memo, Messrs. Vance G. Yates and Leeman J. Cormack, PMO, to Ch, FLAT-TOP Fld Ofc, 22 Mar 68, Subj: Trip Report for Period 19-21 March 1968 by Mr. Vance G. Yates and Mr. Leeman J. Cormack to San Francisco, California.

³⁵⁵ USA Mat. Gp. No. 1, Historical Summary, 15 Jan 73, Annex A, op. cit., p. [81].

³⁵⁶ Ltr, AMCPM-FL, to CNO, 5 Apr 68, Subj: Request Allocation of T-AKV Ship for Army Use.

suggestions,³⁵⁷ supplied the Navy with \$5,000 to make initial conversion designs and conversion time and cost estimates for the Rabaul.³⁵⁸ The Navy's work was to follow those guidelines laid out at a 2-3 April 1968 PMO-BUSHIPS conference in Washington.³⁵⁹

The Rabaul proposal was by far the most ambitious of any FAMF-II proposal. Calling for the support of a 149-man MSTS crew,³⁶⁰ this proposal sketched out a 38-shop vessel carrying a 452-man Army complement. The vessel was to perform general support and back-up direct support maintenance on Army aircraft, aircraft componets, aircraft armament, avionic equipment, and depot air-frame repair. The total cost of this package, excluding military salaries, was approximately \$31 million for conversion and about \$3.9 million in annual operating costs.³⁶¹

Rabaul_PCR

By April 1968, the fourth FAMF-II proposal had begun to

³⁵⁷ (1) Msg, HQ, NAVSHIPSYSKOM, to CG, AMC, 22 Mar 68, Subj: Modification AKV (EX-CVE 105) Class Ship for Army Use. (2) Msg, HQ, NAVSHIPSYSKOM, to AMC, 4 Apr 68, Subj: Request allocation of T-AKV Ship for Army Use.

³⁵⁸ Msg, CG, AMC, to NAVSHIPSYSKOM, 9 Apr 68, same Subj.

³⁵⁹ Memo, Mr. Leeman J. Cormack, FLAT-TOP Fld Ofc, to Ch, FLAT-TOP Fld Ofc, 5 Apr 68, Subj: Trip to Washington, D. C., 2-3 April 1968.

³⁶⁰ Msg, COMSTS to NAVSHIPSYSKOM HQ, 8 Apr 68, Subj: Modification of AKV to T-ARVH.

³⁶¹ (1) MFR, Mr. G. L. Bupp, PMO, 10 Apr 68, Subj: MSTS Manning Scale-FAMF 2. (2) Draft, [PMO], Mission for FAMF-II (AKV-21 Aircraft Escort Carrier), Wash., D.C., 11 Apr 68. (3) Ltr, AMCPM-FL, to CG, MECOM, 17 May 68, Subj: AMCCP-101 Report.

shape itself firmly about the Rabaul. Only two steps remained to solidify the newest FAMF-II PCR:

The AMC took the first step. On 12 April 1968, it ordered the modification of the on-going APJ FAMF-II cost-effectiveness study to include an AKV. This action entailed an extension of the study's due date from 1 November 1968 to 31 January 1969, and it required the addition of an extra work requirement. This requirement charged the APJ to "...assess the potential effectiveness of a FAMF configured for selected aircraft component repair and overhaul and depot airframe maintenance and repair."³⁶²

The second step fell to the Navy. On 22 April 1968, the CNO notified the PMO that, while neither the Kula Gulf nor the USNS Point Cruz (T-AKV-19) was available, the Rabaul could be transferred, contingent upon PCR approval.³⁶³ The NAVSHIPS complemented the CNO's action a week later, providing conversion cost and time estimates for the Rabaul. The figures given were \$23 million in cost, not including electronic equipment, and 43 to 47 months in time. The shorter period was for a naval shipyard, the longer for a commercial shipyard.³⁶⁴

³⁶²Msg, CG, AMC, to CG, AVCOM, 12 Apr 68, Subj: Work Requirements of Contract No. DAAJ-01-68-1582 (31).

³⁶³Ltr, CNO, to AMCPM-FL, 22 Apr 68, Subj: T-AKV Ship for Army use.

³⁶⁴Msg, NAVSHIPSCOMHQ, to CG, U.S. Army at COMSWASH [sic], 29 Apr 68, Subj: Modification of RABAUL (AKV-21) for Army use.

The only barrier now to PCR submission seemed to be the lengthy Navy conversion time estimates. The PMO believed that the Rabaul could be converted in 15 months, not 43 or 47, and that a longer conversion estimate could, as it had earlier, seriously injure the FAMF-II's chances. Accordingly, acting on the advice of the DCSLOG, the PMO left the Navy conversion time estimates out of this latest PCR,³⁶⁵ which it then submitted to the AMC on 28 May 1968.³⁶⁶ On 17 June 1968, the AMC forwarded the PCR to the DCSLOG, with a specific request that the FAMF's be included in a five-year, world-wide contingency plan.³⁶⁷

The PCR was not long in returning. On 28 June 1968, the PM met with DCSLOG representatives to discuss the timing and content of this fourth FAMF-II proposal. The DCSLOG made two suggestions at this meeting: one, that the PCR not be submitted for the FY 1970 budget; and two, that the present APJ study be re-oriented. The former suggestion was made because of a tight budget situation and because of further developments in related floating logistical equipment, the latter because of a need to re-assess the validity of, and the requirements for, a FAMF-II airframe repair facility.

³⁶⁵ MFR, Mr. G. L. Bupp, FLAT-TOP PMO, 13 May 68, Subj: PCR, FAMF-A.

³⁶⁶ USA Mat Gp. No. 1, Historical Summary, Annex A, op. cit., p. [82].

³⁶⁷ PCR, Mr. William O. Harris, Dep Comptr and Dir of Progs, to DCSLOG, 17 June 68, Subj: Program Change Request-Floating Aircraft Maintenance Facility.

The DCSLOG action once again shelved the FAMF-II, this time far to the rear of its warehouse of proposals. The FAMF-II's chances of emerging largely rested with the re-oriented APJ study which, "...if positive, would be incorporated into a new PCR to be submitted in Nov 68 for the FY-71 budget....". The FAMF-II would, moreover, not go forward again alone. Instead, it would "... be considered as part of an FDL PCR package..., [for] DCSLOG representatives feel that the FAMF may have a proper place in such a package, and has its best chance of being approved as part of this package".³⁶⁸

PCR Study

APJ Tasking - Reorientation and Specific Guidelines

The DCSLOG decision to package the FAMF-II with other goods led to yet more APJ study. On 3 July 1968, the DCSLOG set this additional study in motion, notifying the AMC that it would issue a revised study directive.³⁶⁹ The directive followed on 16 September 1968, requesting the AMC to re-evaluate both the requirement and the mission for a FAMF-II in Vietnam. The APJ undertook the study on its existing contract, with a 2 January 1969 deadline for PCR submission.

³⁶⁸ LTC H. B. Blanchard, Jr., DPM, FLAT-TOP, Project Manager's Weekly Significant Action Report, 24 thru 28 Jun 68, Subj: [FAMF-II PCR]. FDL refers to Fast Deployment Logistics, a 1960's concept that called for stationing supply ships just off potentially hostile coasts.

³⁶⁹ Ltr, LTC H. B. Blanchard, Jr., DPM, FLAT-TOP, to DCSLOG, DA, 12 Aug 68, Subj: Implementation of FAMF Study Effort.

On 25 September 1968, the DCSLOG hosted a meeting to clarify the revised study aims. Attendees consisted of representatives of the OSD, the ACSFOR, the DCSLOG, the PMO, and the APJ. The meeting set up a steering committee to monitor the study, and it also led the APJ to consider strongly a JCS suggestion that the FAMF-II's world-wide flexibility be stressed.³⁷⁰

Study Supervision

Only one apparent barrier remained to proceed with the study. This barrier was a rumor, based upon informal DA queries and actions, that the CDC was doing a FAMF study. Coordination revealed that this was not so; the CDC intended to do a FAMF study, but only as a part of its Army 1985 doctrinal effort, an effort not slated to begin until March 1969.³⁷¹ The CDC had planned to do a FAMF study as part of the Army 1975 Study, but this intent had faltered under the strain of higher priority tasks.³⁷²

The illusory CDC obstacle removed, the PMO set about closely monitoring the ensuing APJ work. The bulk of this

³⁷⁰LTC H. B. Blanchard, Jr., DPM, FLAT-TOP, Project Manager's Weekly Significant Action Report, 23 thru 27 Sep 68, Subj: [APJ Study Revision].

³⁷¹(1) MFR, Mr. William H. Gardner, Ass't for Mat'l, PMO, 6 Aug 68, Subj: CDC Study of FAMF. (2) Ltr, COL C. A. Stanfiel, Actg TAG, AGAM-P(M) LOG/MPPD, DA, 26 Sep 68, Subj: Floating Army Maintenance Facilities (FAMF), with 1st Ind, MAJ Samuel E. [?], CDCCD-C, to AGAM-P LOG/MPPD, DA, 26 Sep 68, same Subj.

³⁷²LTC H. B. Blanchard, Jr., DPM, FLAT-TOP, Project Manager FLAT-TOP Weekly Significant Action Report, 30 Sep - 4 Oct 68, [same Subj.].

monitoring was done in coordination with the APJ steering committee, which consisted of various representatives of the DA and the AMC staff, under DPM chairmanship. The committee held four in-process reviews (IPR's) of the study: on 4 November 1968, on 2 December 1968, on 9 January 1969, and on 14 February 1969. The committee agreed with the APJ study approach methodology, and it recommended only minor changes at the meetings. 373

The PMO further ensured a proper APJ study attitude by a series of coordinating measures. The most important of these measures was the conduct of a 4 December 1968 APJ-PMO conference call:

The purpose of this call was to impress on APJ that we are not in anyway attempting to

373 (1) LTC H. B. Blanchard, Jr., DPM, FLAT-TOP, Project Manager FLAT-TOP Weekly Significant Action Report, 4-8 Nov 68, Subj: [APJ Study Progress]. (2) MFR, LTC H. B. Blanchard, Jr., DPM, FLAT-TOP, Subj: Steering Committee for APJ Cost and Effectiveness Study (IPR FAMF-II). (3) LTC H. B. Blanchard, Jr., DPM, FLAT-TOP, Project Manager's Weekly Significant Action Report, 2-9 Jan 69, Subj: [APJ Study Progress]. (4) LTC H. B. Blanchard, Jr., DPM, FLAT-TOP, Project Manager's Weekly Significant Action Report, 10-14 Feb 69, [same Subj]. (5) MFR, LTC H. B. Blanchard, Jr., Chairman, FAMF-II Steering Committee, 8 Nov 68, Subj: Minutes of FAMF-II Steering Committee Meeting on 4 November 1968. (6) MFR, LTC H. B. Blanchard, Jr., DPM, FLAT-TOP, 13 Jan 69, Subj: Minutes of FAMF-II Steering Committee Meeting, 9 January 1969. (7) MFR, LTC H. B. Blanchard, Jr., DPM, FLAT-TOP, 20 Feb 69, Subj: Steering Committee for APJ Cost and Effectiveness Study (IPR IV) Relative to FAMF-II.

influence their study, but because of limited time and short suspense date for preparing the PCR it would be advisable to lock step with APJ and find out what they are recommending and their rationale. Also, to build a framework for the PCR so that it can be modified while the study is in the final stages.³⁷⁴

Besides not influencing the APJ study in any way, the PMO also queried the Navy on conversion estimates for both the AKV class and the larger ESSEX Class carriers,³⁷⁵ made arrangement to visit the USNS Core, the USNS Card, the USNS Croatan, the USNS Rabaul, and the USNS Valley Forge,³⁷⁶ and offered an advance presentation on the FAMF-II at HQ, AMC, on 28 January 1969.³⁷⁷

³⁷⁴LTC H. B. Blanchard, Jr., DPM, FLAT-TOP, 4 Dec 68, Subj: Implication of Possible Major Changes to Ship Design of FAMF-II.

³⁷⁵(1) Ltr, LTC H. B. Blanchard, Jr., DPM, FLAT-TOP, to CO, MSTs, 25 Nov 68, Subj: Estimate of Activation Costs of an AVT class Carrier. (2) Ltr, LTC H. B. Blanchard, Jr., DPM, FLAT-TOP, to Mr. Kaplan, NAVSHIPSYS COM, 10 Dec 68, Subj: Activation/Conversion of the USS RABAUL (AKV-21) for Army use. (3) Ltr, LTC H. B. Blanchard, Jr., DPM, FLAT-TOP, 15 Jan 69, Subj: Estimate for Conversion of a Commencement Bay Class Carrier.

³⁷⁶(1) Msg, COMSTSPAC, to CG, AMC, 6 Dec 68, Subj: Ships Visits. (2) Msg, COMSTS, Wash., to NAVSHIPSYS COM HQ, 9 Dec 68, Subj: Visit to View Carriers. (3) Msg, COMSTS, Wash, to CG, AMC, 10 Dec 68, Subj: Ships Visit. (4) Trip Report, Dr. George Cherwowitz, APJ, to PMO, FLAT-TOP, 16 Jan 69, Subj: 506 - FAMF-II Candidates - "Valley Forge".

³⁷⁷DF, COL Marion W. Parks, Dir of Maint, HQ, AVSCOM, to AMSAV-L-Q et al., 23 Jan 69, Subj: Presentation to be given on FAMF-II.

Study Submission

After this host of PMO preliminaries, the heavily - gui study finally appeared on 2 April 1969. As could be expected close PMO coordination, the study decidedly demonstrated that COMMENCEMENT BAY CLASS FAMF-II was more cost-effective than a land-based competition. Assuming a yearly move, the FAMF-II has these advantages:

<u>Cost Items</u>	<u>FAMF-II</u>	<u>Land Based Fa</u>
Initial Plan Cost	\$36.93*	\$25.70
Amount Not Recoverable Upon Deployment	0.00	19.50
Plant Cost At New Site	0.00	25.70
<u>Annual Operating Cost</u>	<u>17.91</u>	<u>21.10</u>
Net One-Year Operating Costs	\$54.84	\$92.00

* Figures expressed in millions

The FAMF-II, by these figures, enjoyed a \$37.16 million a year, if moved. Assuming no moves, the FAMF-II enjoyed a million annual operating edge. This meant that, after approximately 3.46 years in action, the FAMF-II would have "paid for itself", and began to be profitable, move or no.

The FAMF-II's operating costs largely were for the salaries of 869 men to be placed on board. This manpower total consisted of 180 MSTS crew and 694 Army maintenance personnel. The Army personnel formed a three-company organization, constituted as a 180-man HQ Company, a 256-man Airframe Repair Company, and a 258-man Component Company. The 694-man Army organization was supposed to be able to generate 64,800 manhours per month in production.

The study concluded that the FAMF-II was necessary because both the theater commanders and the United States Army Strike Command (STRICOM) had expressed a need for it. Moreover, the study continued, the filling of this need would be more cost-effective in war or peace than either a land-based competitor or an airlift - supplied ARADMAC.³⁷⁸

Study Reaction

The APJ study did not surface in an entirely favorable atmosphere, for there was renewed strong opposition, both covert and overt, to the FAMF-II concept:

The covert opposition cleverly placed itself behind a 25 September 1968 Besson letter to the DCSLOG. In this letter, GENERAL Besson suggested to LTG Engler that the construction of a second CONUS ARADMAC-type facility be postponed. GENERAL Besson's reason was his belief that, rather than spend on another facility in a postwar austere period, the AMC ought to use funds for wartime-neglected modernization.³⁷⁹

Certain attendees at the fourth APJ Study IPR suggested that GENERAL Besson's remarks might well apply to a FAMF-II,³⁸⁰ suggestions which brought the following Besson response:

³⁷⁸ APJ, Floating Army Maintenance Facility, FAMF-II, Ridgefield, New Jersey, Apr 69, passim.

³⁷⁹ Ltr, GENERAL F. S. Besson, Jr., CG, AMC, to LTG Jean E. Engler, DCSLOG, 25 Sep 68, Subj: [Second ARADMAC].

³⁸⁰ DF, LTC H. B. Blanchard, Jr., DPM, FLAT-TOP, to Attendees of the APJ IPR, 3 Mar 69, Subj: FAMF.

Make it loud and clear to all interested parties that my policy statement concerning new aircraft depot maintenance facilities at new locations (i.e., 2nd ARADMAC) does not include facilities such as FAMF. I want FAMF-II and it will be treated separately from other actions concerning modernization of existing facilities.³⁸¹

The overt opposition was seemingly much less formidable, consisting mainly of AVSCOM sniping at the APJ's evolving version of FAMF-II cost-effectiveness. In its own way, however, this sniping managed to touch several FAMF bases:

First, the concept:

3. The study is based on a "fly on" "fly off" basis".... and the aircraft to be processed would have to be "selected" to keep the repair within the capability and manhours of the ship in order to optimize its use. Of course the report does not deal with how aircraft not meeting the selection criteria would be dealt with, presumably, the way we do now (back to ARADMAC). This appears to be yet another version of the "bob-tailed IROAN" concept which has cropped up from time to time and each time has been rejected. The only difference is that it

³⁸¹MFR, LTC John A. Hammond, Actg Ch, Aircraft Div, HQ, AMC, 24 Feb 69, Subj: [Besson Policy on FAMF-II].

would be done on a ship.

Second, the pipeline savings:

4. The charts show some savings from a "short circuit" of T-53 engines to be run-up on a test stand and minor repair accomplished on board ship....

[This] shows a savings for engines not needlessly sent back to ARADMAC. [However, the] same thing is now being done at the GS and DS level using trailer mounted test stands and avoids even the transportation out to the ship and back. I think the only real help we could give a forward area would be a complete overhaul of engines.

Third, the waterborne security:

5. The whole area of support and protection costs were not addressed....[and] certainly have to be deducted from the projected cost savings stated....[Moreover, this presentation] also does not address any options if the ship could not be anchored in close proximity to the land based supply depots or if the enemy had any air or underwater capability to destroy the ship.

Fourth, the cost-effectiveness:

6. In order to agree with the cost effectiveness and savings projected, you must also agree with all of the stated and unstated theory and concept guidelines that were used. If you do agree, then I think this is

a good study. I would rather believe that we do need some type of close-in airframe support and it will cost us money rather than save money....I have never known a project that did not exceed the stated costs in the study that authorized it.

And, fifth and finally, the peactime users of a FAMF-II:

7. The peace time uses (except moth-ball) would be costly compared to the use of contract/depot field teams tailored to do any type of retrofit or to cope with peak workloads of inspections or other field maintenance.³⁸²

The AVSCOM also presented a detailed list of UH-1 ARADMAC repair estimates which it believed to be excessive.³⁸³

DA Reception

There were apparently those at the DCSLOG who shared the AVSCOM's views on the FAMF's cost-effectiveness. By mid-April 1969, the PMO was receiving rumors that the DCSLOG did not consider the APJ Study as thorough and that, even if it did, the DA could not afford a

³⁸² Memo, Mr. A. Peschke, Ch, Progs Sec, Pol, Pln, & Prog Div, HQ, AVSCOM, to LTC Robert Lawrence, Maint Dir, AVSCOM, 5 Feb 69, Subj: Comments on the Briefing for the Second Floating Army Maintenance Facility (FAMF-II).

³⁸³ Ltr, COL Marion W. Parks, Dir of Maint, AVSCOM, to PM, FLAT-TOP, 7 Feb 69, Subj: FAMF-II Progress and Status Briefing (APJ 506-407) Presented to USAAVSCOM 27 Jan 69, w. 1 Incl, USAAVSCOM Comments Concerning the Briefing on FAMF-II (APJ 506-407) Presented to USAAVSCOM 27 Jan 69.

FAMF-II in FY 1971.³⁸⁴ On 18 April 1969, these rumors acquired a solid base; on that day, the DCSLOG advised the CG, AMC, to defer the FAMF-II PCR "...until a complete and detailed review of the study can be accomplished and a more optimistic budgetary environment occurs."³⁸⁵

The FAMF-II PCR spent the next two months in DA staffing. This period, and the closing days of the APJ study, proved to be a final happy moment of the PMO. In this interlude, it entertained a proposal to build an entirely new ship as the FAMF-II;³⁸⁶ queried the Navy, again unsuccessfully, on the reduction of Rabaul conversion costs; sought fruitlessly to minimize such costs by the use of a commissioned ship;³⁸⁷

³⁸⁴ MFR, LTC H. B. Blanchard, Jr., DPM, FLAT-TOP, 15 Apr 69, Subj: Status of APJ Study at DA.

³⁸⁵ 1st Ind, MG John J. Hayes, Ass't Dep C of S for Log (Supply & Maint), DA, to CG, AMC, 18 Apr 69, Subj: Capability Analysis of Alternatives for Theatre Support of Army Aircraft (FAMF-II).

³⁸⁶ (1) Ltr, Dr. George Chernwowitz, Dir, APJ, to LTC H. B. Blanchard, Jr., DPM, FLAT-TOP, 13 Feb 69, Subj: [FAMF-II as New Construction].
(2) Ltr, Mr. R. E. Apple, Dir of Adv Projs, Litton Industries, to LTC H. B. Blanchard, Jr., DPM, FLAT-TOP, 26 Mar 69, [same Subj].

³⁸⁷(1) MFR, LTC H. B. Blanchard, Jr., DPM, FLAT-TOP, 6 Feb 69, Subj: Cost and Feasibility of Converting the USS Rabaul into FAMF-II. (2) Ltr, LTC H. B. Blanchard, Jr., DPM, FLAT-TOP, to Cmdr, MSTs, 17 Feb 69, Subj: Request Consideration for Availability of Commencement Bay Class (AKV) Carrier for Army Use. (3) Ltr, CMDR, MSTs, to CG, AMC, 25 Mar 69, Subj: Availability of Commencement Bay Class (AKV) Carrier for Army Use.

and solicited CG, AMC, AVSCOM, and USARPAC PCR support.³⁸⁸

On 23 June 1969, the DCSLOG, after DA coordination, ended the interlude. By this time, a shortage of funds had become the overriding DA concern, and only the most essential programs could be funded. The DA did not believe that the FAMF-II was most essential, and so it informed the new CG, AMC, "that a PCR submission will have to be deferred until FY-72 budget because of the present austerity program in funding new requirements."³⁸⁹

This latest DA PCR delay proved fatal for the FAMF-II. The long postponement combined with three factors to produce this result:

first, funding problems. Vietnam phase-down funding problems had already appeared in FY 1969. They would become worse, not better, in the years to come. Thus the DA would never have that "more optimistic budgetary environment" in which to fund the FAMF-II.

second, DA lukewarmness. The DA, especially the DCSLOG, was

³⁸⁸(1) DF, LTC H. B. Blanchard, Jr., DPM, FLAT-TOP, to AMCCP-PP, 20 Jun 69, Subj: PCR for a Second Floating Army Maintenance Facility (FY 71 Budget Cycle). (2) Trip Report, LTC H. B. Blanchard, Jr., DPM, FLAT-TOP, to AMCPM-FL-C et al., 28 Mar 69, Subj: Trip Report-DPM to AVSCOM. (3) MFR, LTC H. B. Blanchard, Jr., DPM, FLAT-TOP, 19 Mar 69, Subj: USARPAC Support for FAMF-II.

³⁸⁹Msg, DA, to CG, AMC, 23 Jun 69, Subj: Floating Army Maintenance Facility (FAMF-II). GEN Ferdinand J. Chesarek succeeded GEN Besson as CG, AMC, on 10 Mar 1969.

never really "sold" on the cost-effectiveness of the FAMF concept. Each time a FAMF proposal had come up, the DA had sent it back for more study. If the DA had really wanted a FAMF-II, it would have gotten one in the early, free-spending days of Vietnam.

and, third, FLAT-TOP deprojectization. The foremost FAMF promoter had always been the FLAT-TOP office. With its vested interest, its close HQ, AMC, relationship, and its Washington location, the office was well-suited to "push" its projects. The office's demise put the FAMF concept under the AVSCOM, which had never been keen on any FAMF.

Conclusion

After its rejection for the fourth time, the FAMF-II proposal languished. The DA had decided, fairly or not, that it could not afford any more FAMFs, at least not now. Then when?

The DA had directed the PMO, as we have seen, to divert some of its FAMF proponency energies to the justification of a postwar ship. Unfortunately, the war went on and on, the postwar period seemed ever more distant, and expenses grew. After a while, the question became not the economic justification of more FAMFs, but the economic justification of the FAMF-1 itself.

CHAPTER IV THE FAMF

HOMEFRONT: MANAGEMENT, 1966-1968

A Privileged PMO: 1966-1968

Introduction

The final lapse of the FAMF-II was but the most obvious symbol of the beginning of the end of the whole FAMF project. This project had attempted much, demanding more offices, more ships, more men, and more money. It did not get any of these wants. Moreover, it had been reduced, as the FAMF-II story closed, to defending what little it had.

Seen only in this acquisitive context, the project seemed to have followed a standard bureaucratic pattern. First, it used an initial push, with "inside help," to get going. Once started, it employed its momentum to "empire-build." The project, however, was not a normal operation; it was project-managed.

This project management status gave the office an unusual character. The PMOs, by definition, were meant to give a particular item or system that intensive management necessary to expedite fielding. Thus the AMC had a NIKE-X PMO, a GAMMA GOAT PMO, and so forth. The FLAT-TOP PMO, however, did not strike its tents after the FAMF reached Vietnam; instead, it cast about, as it were, for more work to do.

The PMO's quest kept it in operation for three and one-half years after the FAMF first dropped anchor off Vung Tau. During

this period, the PMO used its status not only to promote FAMFs, but also to secure special attentions to itself. These attentions, in turn, "spun-off" their own privileges.

In short, one good thing led to another. Two excellent case examples of this were the BP 2300 Controversy and the Corpus Christi Barracks:

The BP2300 Controversy

The unique deployed depot status of the FAMF, in itself a privilege, entailed two other favorable exceptions from the rules. These two exceptions were: one, exercise of FAMF command control by the AMC, rather than the theater commander; and two, establishment of a Table of Organization and Equipment (TOE) structure for the FAMF, instead of a Table of Distribution and Allowances (TDA). Accompanying these two exceptions, and apparently conflicting with them, was a third exception that FLAT-TOP was trying vigorously to obtain in early 1966: exemption of the FAMF from depot reporting rules in favor of more relaxed Budget Program (BP) 2000 standards.

It was this third exception that remained the crux of the BP 2300 controversy. According to regular procedures, any facility named a depot had to follow those complicated BP 2300 reporting procedures outlined in AR's 37-55 and 750-9. These procedures not only prescribed the maintenance and financial management policies, operations, and accounting records to be followed, and the reports to be submitted, for depot maintenance activities, but they also provided instructions and methods for the preparation and

submission of EAM cards and magnetic tapes used in costing depot-level maintenance data. The result was a complex total called a uniform depot maintenance cost accounting and production reporting system. This system had two facets; one, innumerable reports of man-hour workloads, accounting classifications, error identifications, and maintenance conversions; and, two, many types of costs, such as base operations, transfers, overruns, cannibalized parts, and idle plant capacities.³⁹⁰

Adherence to BP 2300 standards, therefore, involved intricate and time-consuming reporting. Nevertheless, adherence faced FLAT-TOP, for the AR's specifically stated that they applied to all Army installations and activities performing depot maintenance operations. This application directly touched both the FAMF's special status and repeated FLAT-TOP claims that the FAMF was truly a depot that performed depot-level maintenance.³⁹¹ If one accepted the status and the claims, then one could well conclude that the FAMF should be making all of the reports done by depots.

The FLAT-TOP did not, however, accept this conclusion. The FLAT-TOP reasoned that the FAMF was a small operation, and any submission of voluminous

³⁹⁰(1) AR 37-55, HQ DA, 30 Dec 65, Financial Administration, Uniform Depot Maintenance Cost Accounting and Production Reporting System.
(2) AR 750-9, HQ DA, 10 Sep 64, Maintenance of Supplies and Equipment, Depot Maintenance Preparation Report (RCS DD-I&L (A) 590).

³⁹¹One of many FLAT-TOP depot arguments is found in Ltr, COL John F. Sullivan, PM, FLAT-TOP to CO, 1st Mat Gp (Log Spt) (S), and Chief, FLAT-TOP Control Center, 19 Dec 66, Subj: Project Manager's Position - FAMF Workload - GS or Depot Level.

reports could hamstring its crew. As LTC Sullivan wrote, AR 37-55 seemed to be nothing more than an attempt to vex the Army's small businessmen. FLAT-TOP clearly wished special status for the FAMF - a small depot, not required to submit to all depot regulations, but a depot nonetheless.³⁹²

Behind FLAT-TOP's insistence on depot status lay three profound reasons. In ascending order of importance, these reasons were: one, if the FAMF were a depot, then it would be under AMC control; two, if the FAMF could retain both its depot status and its TOE crew, then it could continue to have the best of both worlds - all of the extra equipment accorded a depot, and none of the vicissitudes of a normal depot TDA structure; and, three, if the FAMF could be presented to DA as a depot, then its special deployment role would be ensured. FLAT-TOP subsequently had to fight for all three reasons.

The first hint of trouble surfaced on 14 December 1965, when the AMC notified the DCSLOG, HQ, DA, that it needed policy guidance relative to AR 37-55. The AMC requested two items of BP 2300 guidance, both in the form of questions:

a. Funded inventory estimated to cost between \$1.5 million and \$2.0 million will be pre-positioned aboard the floating aircraft repair facility, Corpus Christi Bay. Does Stock Fund or BP 2300 finance this inventory?

³⁹² MFR, LTC John F. Sullivan, PM, FLAT-TOP, 8 Feb 66, Subj: AR 37-55, Depot Maintenance Reporting, FAMF.

b. Assuming that BP 2300 will finance the inventory, will a consumer-owned capitalized inventory be authorized or should the inventory be costed as work-in-process under a perpetual specially controlled work order?

The AMC answered its own questions, recommending the use of BP 2300 on a one-time basis to finance the pre-positioned inventory. This step, the AMC argued, would obviate both the complicated obligation of, and the formal accounting for, Stock Fund capital.³⁹³ It would also pave the way for the use of more easily reportable BP 2000 funds for funding CCB operations.

On 9 February 1966, the AMC began formal pursuit of BP 2000, holding a meeting in the office of the Comptroller, AMC. Present at the meeting were the Comptrollers of the AMC and the SMC; three AMC Comptroller personnel; and LTC Sullivan. COL Jones, one of the Comptroller personnel, noted that his office had drafted a basic letter to the ACSFOR proposing the use of BP 2000 funds, but the ACSFOR had objected. The conferees decided to let the FLAT-TOP PM sell the DA staff on BP 2000. In case he could not, the conferees devoted the remainder of their day in laying out alternative FAMF funding operational systems.³⁹⁴

The DA was not, however, easily persuaded. Consequently, the FLAT-TOP

³⁹³Ltr, COL B. W. Henderson, Chief, Plans and Programs Office, Directorate of Maintenance, HQ AMC to LOG/J4, DCSLOG, HQ DA, 14 Dec 65, Subj: Project FLAT-TOP.

³⁹⁴MFR, LTC John F. Sullivan, PM, FLAT-TOP, 9 [Feb] 66, Subj: FAMF Materiel Maintenance Reporting.

passed through an interim period in which it made necessary compliance with BP 2300 cost accounting procedures.³⁹⁵ This situation continued until 14 October 1966, when DA made two study-based decisions: one, effective 1 July 1966, it transferred fiscal and financial responsibility for CCB operating costs to the Commander-in-Chief, United States Army, Pacific (CINCUSARPAC); and, two, effective 1 November 1966, the FAMF's BP 2300 mission funds were to be replaced by BP 2000 funds.³⁹⁶

The DA's answer, as the PM, FLAT-TOP Office noted, was not wholly satisfactory. First, it restricted the BP 2000 fund transfer to mission parts only, which excluded programmed capital equipment, special tools, and MSTs and field office operating costs. Second, the AMC Comptroller, in interpreting the DA directive, held that operating costs were only the costs of mission parts. This meant \$2.7 million programmed for FAMF mission support in FY 1967, versus the \$3.5 million in total costs desired by the FLAT-TOP PM.³⁹⁷

The ARADMAC quickly tried to smooth these rough edges with the AMC. As a preliminary, it got the AMC to obtain CINCUSARPAC concurrence with its current method of procuring FAMF mission supplies and materials from

³⁹⁵ (1) Ltr, BG E. G. Hardaway, Comptroller and Director of Programs, HQ AMC to CG, SMC, 18 Mar 66, Subj: Floating Aircraft Maintenance Facility (FAMF). (2) Ltr, LTC John F. Sullivan, PM, FLAT-TOP to CO, 1st TC Bn (AMD) (S), 18 Mar 66, Subj: FAMF Management Control System.

³⁹⁶ Msg, DA to CINCUSARPAC, CG ARADMAC and CG AMC, 14 Oct 66, Subj: Floating Aircraft Maintenance Facility.

³⁹⁷ (1) Msg, CG AMC to CO 1st Mat Gp, 1 Oct 66, Subj: Floating Aircraft Maintenance Facility. (2) DF, LTC John L. Gardner, DPM, FLAT-TOP to AMCCP-OP, 1 Nov 66, Subj: Floating Aircraft Maintenance Facility Funding (CORPUS CHRISTI BAY).

its own stores.³⁹⁸ This done, the ARADMAC attacked the immediate issues of BP 2300 coverage and FY 1967 budget estimates.

Time, however, closed out the FLAT-TOP AMC BP 2000 relationship. On 28 October 1966, in anticipation of this phase-out, the AMC notified the ARADMAC that: one, it refused to grant a 19 October 1966 ARADMAC request to extend the 1 November 1966 funds transfer date; two, that BP 2000 funds would cover not only the CCB's mission supplies and materiel, but also its tools, capital equipment, and TDY costs; and, three, that the ARADMAC now had authorization to go directly to USARPAC with its funding requests.³⁹⁹ The DPM, FLAT-TOP, after a preliminary inquiry to the AMC, responded accordingly, submitting his first statement of requirements to USARPAC on 17 November 1966.⁴⁰⁰ The ARADMAC eventually got most of the \$800,000 extra it was seeking in BP 2000 funds.⁴⁰¹

The AMC was even less pleased. On 16 January 1967, the AMC requested the COA to restore to it, effective 1 July 1967, fiscal and financial responsibility for the CCB's operating costs. The AMC based its argument on its command control of the CCB.⁴⁰² The COA refused the AMC's request

³⁹⁸Msg, CG, AMC, to CO, 1st Mat Gp, 21 Oct 66, Subj: Floating Aircraft Maintenance Facility (FAMF) (Corpus Christi Bay). (2) Msg, CINCUSARPAC to CG, AMC, 26 Oct 66, same subject.

³⁹⁹Msg, CG, AMC, to CO, ARADMAC, 28 Oct 66, Subj: Floating Aircraft Maintenance Facility (Corpus Christi).

⁴⁰⁰(1) DF, LTC John L. Gardner, DPM, FLAT-TOP, to AMCCP-OP, 1 Nov 66, Subj: Floating Aircraft Maintenance Facility Funding (Corpus Christi Bay). (2) Msg, CO, ARADMAC, to CINCUSARPAC, 17 Nov 66, Subj: Floating Aircraft Maintenance Facility (Corpus Christi).

⁴⁰¹Project FLAT-TOP Historical Report, FY 1967, p. 5.

⁴⁰²Ltr, BG O. W. Barsanti, Comptroller & Director of Programs, HQ AMC, to COA, 16 Jan 67, Subj: Floating Aircraft Maintenance Facility - Corpus Christi Bay.

on 23 March 1967, stating that, in return for USARPAC flexibility, the FAMF had to submit to both USARPAC funding and workloading.⁴⁰³

With neither the PM nor the AMC happy, the BP 2300 question could not rest. Under PM prodding, the AMC, strongly led by LTC William B. Bunker, DCG, AMC, formally re-opened the question in a 5 February 1968 letter to the DCLSOG. In this letter, LTG Bunker proposed full depot status for the FAMF - in an AMC-weighted compromise. The AMC would regain financial responsibility for the FAMF from the CINCUSARPAC, and the FAMF would retain its TOE organization; the AMC, in return, would require the FAMF to meet all depot report requirements, which, with recent computerization advanced, would cost the AMC little.⁴⁰⁴

The AMC, in summary, wanted the FAMF in its depot stable, despite the BP 2300 implications. As the Chief of the FLAT-TOP Field Office noted, "...the use of BP 2000 funds ... creates in the minds of many the image of a facility of less than depot status."⁴⁰⁵

The fund re-switch stirred opposition both at HQ, AMC, and at HQ, AVCOM. On 29 March 1968, the Finance and Accounting Division (F&A) HQ, AMC Comptroller Office, said that the "...FAMF should remain in BP 2000 ...because its] repair and rebuild of assemblies and sub-assemblies

⁴⁰³ 1st Ind to above letter, 23 Mar 67, same subject.

⁴⁰⁴ Ltr, LTC H. B. Blanchard, Jr., DPM, FLAT-TOP, to DCG, AMC, 5 Feb 68, Subj: Organization and Funding of FAMF 1, with 1 Incl, Ltr, LTC William B. Bunker, DCG, AMC, to LOG/MPPD, DCSLOG, 5 Feb 68, same subject, w/ 4 Incl.

⁴⁰⁵ Ltr, LTC John Bergner, Chief, FLAT-TOP Field Office, [c. 7 Feb 68], Subj: Budget Program for Funding of FAMF Operations.

[for unknown] end items [would cause great difficulty in the] identification of parts, labor and overhead to.... [any] specific end item weapon/support system."⁴⁰⁶ The AVCOM's Special Assistant for Materiel Readiness had objections similiar to the F&A's. On 8 April 1968, he noted that the FAMF's "workload data....[had little] relation to items....[and that reporting] is strictly left to guesswork." He therefore concluded that "...treating the FAMF as a maintenance facility to be controlled, scheduled and work-loaded from AVCOM is not desirable at this time...., [and the FAMF should] proceed as at present."⁴⁰⁷

This dissent was not strong enough to overcome LTG Bunker and the AVCOM Comptroller. On 4 April 1968, this latter force added his weight to the BP 2300 forces, specifically recommending that he "physically" control FAMF funding, and that the CG, AVCOM be responsible for determining the FAMF's utilization, workload, and budget and fund programs. Moreover, he stated that the AVCOM should absorb the FAMF PM, concluding that since "FAMF is an aviation maintenance facility, the quicker we get control of it the better the overall aviation program will result."⁴⁰⁸

The AMC, and the AVCOM, were so confident of DCSLOG approval of BP 2300 funds that a series of councils took place to plan change

⁴⁰⁶MFR, Mr. U. X. Vognerini, Finance & Accounting Division, Comptroller Office, HQ, AMC, 29 Mar 68, Subj: Proposed BP 2300 Funding of the 1st TC Bn (FLAT-TOP).

⁴⁰⁷MF COL Bristol, Mr. Eric H. Petersen, Special Assistant for Material Readiness, 8 Apr 68, Subj: FAMF Budget-Funding & [sic] Workloading.

⁴⁰⁸DF, Mr. Leland Springer, Comptroller and Director of Programs, HQ, AVCOM, to Special Assistant for Material Readiness, HQ, AVCOM, 4 Apr 68, Subj: [Review of FAMF funding requirements].

implementation. These councils included four meetings at the ARADMAC, on 28-29 March 1968, 3 April 1968, 17 April 1968, and 11 June 1968; a conference at Letterkenny Army Depot (LAD), Chambersburg, Pennsylvania, 18-19 June 1968; and a meeting at HQ, AVCOM, on 26 June 1968.⁴⁰⁹ These councils were not in vain; the ARADMAC received notification to switch to BP 2300 financing on 27 July 1968.⁴¹⁰

The FAMF retained its unique depot status and TOE organization until its return to home port. Nevertheless, the FAMF never completely adjusted to the depot maintenance cost and production reporting requirements. In mid-1970, for example, HQ, AVSCOM, was still generating FAMF reporting complaints. The Director of Maintenance, HQ, AVSCOM, for example, noted that the FAMF had never been able to meet reporting system standards.⁴¹¹

⁴⁰⁹(1) MF Chief of FLAT-TOP Field Office, Mr. Herbert J. Lehn, Chief, Programs Division, FLAT-TOP Field Office, 1 Apr 68, Subj: BP 2300 Funding for FAMF-1. (2) MF Chief, FLAT-TOP Field Office, Mr. Herbert J. Lehn, Chief, Programs Division, 3 Apr 68, same Subj. (3) MF Chief, FLAT-TOP Field Office, Mr. Herbert J. Lehn, Chief, Programs Division, 18 Apr 68, same Subj. (4) MF Chief, FLAT-TOP Field Office, Mr. Herbert J. Lehn, Chief, Programs Division, 12 Jun 68, same Subj. (5) Msg, CG, AVCOM, to CO, ARADMAC, 17 Jun 68, Subj: Conference on Funding of FAMF. (6) MFR, Mr. Herbert J. Lehn, Chief, Programs Division, 24 Jun 68, Subj: Trip Report - DMCC, Chambersburg, Pa - Discuss Methods and Problems Relative to Funding FAMF-1 Under BP 2300 Money. (7) MFR, Mr. Herbert J. Lehn, Chief, Programs Division, 28 Jun 68, Subj: Trip Report - AVCOM - BP 2300 Funding for FAMF-1.

⁴¹⁰Msg, CG, AVCOM, to CO, ARADMAC, 26 Jul 68, Subj: Financing for FLAT-TOP for FY 69.

⁴¹¹Ltr, COL Vaughn C. Emerson, Director of Maintenance (NMP), HQ, AVSCOM, [c. 15 Jul 70], Subj: Accomplishment Reporting for the Floating Army Maintenance Facility (FAMF).

The AMC heeded the Director's complaints. On 13 August 1970, the AMC freed the FAMF from the requirement of matching its output against established standards. FAMF instead would "...use a single bulk authorization," reporting its actual accomplishments by FSN.⁴¹²

This action finally put the BP 2300 matter to rest. The FLAT-TOP's victory was total: the FAMF continued as a depot, remained under AMC command control, kept its TOE organization, and obtained a major reporting exemption. All of these victory provisions were vital to the FLAT-TOP's conception of FAMF operations, and they formed necessary precedents for the projected deployment of other FAMF's.

Corpus Christi Barracks

The construction of special FLAT-TOP barracks at Corpus Christi was another example of the PMO's use of its status to get privileged treatment. When the 1st TC Bn (AMD) (SBN) was established on 6 October 1964, all enlisted housing on the Corpus Christi NAS was of wooden, World War II construction, with an attendant lack of modern conveniences. Air conditioning of this construction was minimal, making living conditions less than desirable in the normally warm, sultry South Texas climate. Finally, with the recent growth of the ARADMAC, the Naval Air Station (NAS) was crowded.

None of these considerations were lost on LTC Sullivan. Soon after FLAT-TOP elements began assembling at Corpus Christi, LTC Sullivan

⁴¹²Ltr, Mr. Robert E. Griffith, Acting Executive Officer (XO), Comptroller HQ, AMC, to CG, AVSCOM, AMSAV-L-FPSP (NMP), 13 Aug 70, Subj: Depot Maintenance Cost and Production Reporting (DD-I&L(A) 911) for Floating Aircraft Maintenance Facility (FAMF) - FLAT-TOP.

made a thorough survey of the NAS. He found delapidated, unairconditioned barracks, "grossly inadequate administrative space", a "sadly deteriorating" hospital, and an "undermanned" commissary. LTC Sullivan said that the Navy had no intention of rectifying these problems, since it was "not putting money into rebuild of facilities for NAS Corpus", and since it was "equally unconcerned about providing the usual standard of personnel service in the way of adequate numbers of personal service type personnel".⁴¹³

Never passive, the PMO quickly took two steps. First, it informed both the CG, AMC, and local Navy authorities of the problems.⁴¹⁴ Second, it began considering solutions to the problem. One idea was the occupancy of a rented, airconditioned, office building in downtown Corpus Christi for administrative space.⁴¹⁵ Another better idea was a proposal that the FY 1967 Military Construction, Army (MCA) fund planning be revised to include the following permanent installations at the NAS :

- first, two barracks, each with a 252 EM capacity
- and space for company administration and supply
- second, one Group Headquarters building
- third, one Battalion Headquarters building

⁴¹³ Memo, LTC John F. Sullivan, PM, FLAT-TOP, for GEN Besson, 22 Mar 65, Subj: Permanency of ARADMAC Facility.

⁴¹⁴ Memo, LTC John F. Sullivan, PM, FLAT-TOP, for GEN Besson, 23 Mar 65, same Subj.

⁴¹⁵ Ltr, LTC Robert A. Filby, Ch, FLAT-TOP Fld Ofc, to CO, ARADMAC, 24 Mar 65, Subj: FAMF Control Center Requirement for Administrative Space.

and, fourth, one Training Building.⁴¹⁶

The ARADMAC's immediate response to this proposal was "it can't be done". Not only was the FY 1967 program now before Congress, but the FLAT-TOP either did not address or left unanswered several pertinent questions. Among these questions were: Where were those as yet nonexistent organizations that were to occupy the new buildings? Even if these organizations formed, could they not be accommodated into Barracks 78 and 79, now occupied by only 145 of the 373 EMS assigned to the battalion? What of the upgrading of Building 79 and plans to upgrade both Building 78 and the Bn's current administrative headquarters space, Building 37? When will all of this work be needed? And, finally, what of the context of the two barracks programming proposal, which was postulated not as an item for increased personnel, but rather as a replacement item for current strength, which the ARADMAC was then adequately housing as per Army regulations?⁴¹⁷

The FLAT-TOP did not answer these questions at first, for it was in a hurry to get its construction objectives into the FY 1967 MCA budget. On 16 April 1967, the ARADMAC submitted, for the PMO, a MCA proposal for these objectives. This proposal consolidated the previous 26 March 1965 four-building request into one 700-man EM barracks. These barracks were to accommodate the bulk of 987 EM's

⁴¹⁶ Captain (CPT) J. H. Millions, 1st TC BN (AMD) (SBN), to CO, ARADMAC, 26 Mar 65, Subj: MCA Requirements for Permanent Barracks and Administration Facilities.

⁴¹⁷ DF, CPT Arthur F. Boudreau, Dir of Eng, ARADMAC, to CO, 1st TC Bn (AMD) (SBN), 6 Apr 65, Subj: MCA Program Development.

to be assigned to the two battalions. Two wooden buildings would be freed for Naval use by the construction.⁴¹⁸

Six days later, on 22 April 1965, the CO, ARADMAC, forwarded the PMO request to the CO, NAS.⁴¹⁹ This action, however, did not ensure a smooth upward passage for the building proposal. Dissent to the proposal lurked just beneath the surface, and it did not take long to emerge.

On 26 May 1965, this opposition took form in a letter from the AMC's Director of Installations and Services. Leading off with a statement that the "basic justification and logic for a 700-man barracks plus admin facilities is simply lacking", the letter went on to cite a list of major deficiencies, culminating in a request for:

...a basically logical and complete consideration of this seemingly "hot-getting-hotter" requirement. I fail to see how a 700-man barracks available in late 1968 is the answer, unless it is expected that the Viet war continues that long or longer. If you can't prepare a satisfactory evaluation, can you please arrange for me a conference with the FLAT-TOP project manager here?⁴²⁰

⁴¹⁸DD Form 1391c, MCA Line Item Data, 16 Apr 67, Subj: 700 Man Enlisted Men Barracks w/o Mess and Administrative Facilities. Signed Mr. R. H. Shaw, Ass't Ch, Facs Div, Dir, Trans & Install's.

⁴¹⁹Ltr, CO, ARADMAC, to CO, NAS CORPC, 22 Apr 65, Subj: [FY 1967 MCA Program].

⁴²⁰4th Ind to Memo, COL Alfred J. D'Arezzo, Dir of I&S, for Ch, C&RP Div, 26 May 65, Subj: ARADMAC.

The director got his meeting in his office. Held on 7 June 1965, this meeting had three attendees: the PM, the Director, and one member of the Director's staff. The purpose of the meeting was to discuss whether the new barracks needed to be built or not.

The meeting went well for the persuasive PM, LTC Sullivan. Beginning with a notation that he would soon have 700 men to house, thus by-passing the replacement objection, LTC Sullivan went on to state that, as these men were to be housed on a NAS, construction for them "must be to Navy specification". The Navy offered him three alternatives: "...a 252-man barracks, a 500-man barracks, or a 700-man barracks". As none of these alternatives provided "administrative space in the barracks complex....[housing had to be] reduced by an estimated 20% to provide an orderly room, supply room, postal facilities, etc., which are normally provided in Army standard construction. [Thus] two 252-man barracks or one 500-man barracks do not provide adequate space [but] the 700-man barracks can be fully utilized spacewise". As a result of the LTC's arguments, the Director agreed to draft a letter to the DA seeking special OSD legislation to move the requirement up to FY 1966.⁴²¹ The requested letter went out on 22 June 1965.⁴²²

⁴²¹MFR, LTC John F. Sullivan, PM, FLAT-TOP, 7 Jun 65, Subj: MCA, AMC Case C-97.

⁴²²Ltr, COL Alfred J. D'Arezzo, Dir of I & S, AMC, to DCSLOG, DA, 22 Jun 65, Subj: Enlisted Men's Barracks and Administrative Facilities for Project FLAT-TOP, U. S. Naval Air Station, Corpus Christi, Texas.

In anticipation of the letter, LTC Sullivan began preparing his case for the DA. This preparation included the determination of the exact space requirements needed and the collection of a list of arguments in favor of the project. The former task was relatively easy, for it was postulated upon almost certain needs. The latter case, however, was not so simple, for it really rested upon the contention that a special project deserved special attention. As LTC Sullivan wrote, highly skilled aviation personnel deserved good facilities in a climate in which "...the outside temperature remains in the middle 90's and the humidity hovers at 85% seven months of the year."⁴²³

In the event that these plans were deferred, LTC Sullivan had an alternative plan for a floating barracks. Cited as a temporary, unprogrammed expediency, these barracks would be moored about 12 miles from the ARADMAC.⁴²⁴ This idea was an apparent "throw-away", for it never had currency, even with the PMO.

Meanwhile, the construction project soon began to appear as though it would have the same luck as the FAMF-II PCR. On 22 July 1965, the DCSLOG provided the first setback, advising the AMC that any additional FLAT-TOP personnel spaces would have to be drawn from in-house resources. This blow against the main justification for the barracks was followed by the TAG's 20 December 1965 return of the barracks PCP as an inappropriate format and by a 12 July 1966 DCSLOG

⁴²³MFR, LTC John F. Sullivan, PM, FLAT-TOP, 15 Jun 65, Subj: MCA Corpus Christi.

⁴²⁴MFR, LTC John F. Sullivan, PM, FLAT-TOP, 7 Jun 65, op. cit.

redirection of barracks funds to build pipelines in Alaska.⁴²⁵

On 4 November 1966, the project apparently got going again. On that date, the AMC received verbal authority from the DA to proceed, via the Navy, to procure the barracks. The ARADMAC attempted to hurry, placing a 15 December 1966 request for FY 1967 MCA supplemental funds for the construction. On 21 December 1966, however, DA refused this request.⁴²⁶

The project, as a consequence, had to wait until the pipeline - devoted funds could be replaced. During this interim, the project got a scare. On 21 February 1967, the AMC informed the PMO that the DA was showing signs of apprehension on project approval.⁴²⁷ Nothing came of this though, and, on March 1967, the way was cleared for construction to begin.

The project's physical phase lasted about 15 months. It involved the construction of a new EM barracks and the rehabilitation of an existing structure for the offices of the Field Office, the Group, and the Training Battalion. The project was completed on 2 July 1968 at a cost of \$985,000. The new EM barracks contained quarters for 260 men and administrative space for battalion components.⁴²⁸

As was the case of the FAMF-I, the completion of the barracks

⁴²⁵USA Mat Gp No. 1, Historical Summary, 15 Jan 73, Annex A, op. cit., pp. [28, 39, 57].

⁴²⁶Ibid, pp. [66, 69].

⁴²⁷DF, AMCIS-CP to AMCPM-FL, 21 Feb 67, Subj: EM Barracks at NAS, Corpus Christi.

⁴²⁸USA Mat Gp No. 1, Historical Summary, 15 Jan 73, p. 6.

marked the end of actual construction, but not of construction actions. The barracks were, after all, only replacement items, and the PMO expected a great augmentation of personnel upon the approval of more FAMF's. Consequently, on 20 April 1968, the PMO submitted two additional construction requests, one for two 166-man EM barracks, the other for a group administration and classroom building.⁴²⁹

These two requests did not receive a favorable reception, for they depended entirely upon the success of the fruitless FAMF-II proposals. When the proposals were deferred, the concomitant building requests wilted.

Privileged Policies: 1966-1968

Introduction

As both the BP2300 and the Corpus Christi Barracks episodes illustrate, the PMO was a special operation which, at least in the initial going, got its way. These early successes were important for more than their own sakes. Not only did they act as reference points for a whole series of expansionary FAMF PCR's, but they also served as powerful influences upon the FAMF's internal, or non-PCR, actions.

These influences appear time and again in the three major FAMF

⁴²⁹ (1) DD Form 1391, MCA Line Item Data, 20 Apr 68, Subj: Two 166-Man EM Barracks. Signed COL Luther G. Jones, Jr., CO, ARADMAC. (2) DD Form 1391, MCA Line Item Data, 20 Apr 68, Subj: DFRP Gp Admin & Clrm Bldg, Signed COL Luther G. Jones, Jr., CO, ARADMAC.

internal management areas: the recruitment of personnel; the procurement of funds; and the enlistment of MSTs services.

Personnel Recruitment

The PMO, as we have seen, started with the best personnel advantage of all: a capability to take "the pick of the litter". Though this capability was soon lost, the PMO continued to have two major edges. These were: first, a highly desirable organization to use as bait; and, second, a specific training program designed to produce an elite outfit to man that organization.

The first edge, the FLAT-TOP battalion organization, offered both obvious and unapparent premiums. The former consisted of those professional qualities that could be produced by establishing a high-ranking, well-trained body of EMS who, exempt from other duties, could devote full-time to their areas of specialization. The latter types of premiums were "spin-offs" from the former. For example, an embarked battalion member could eat hot meals and sleep on clean sheets in air-conditioned quarters in a combat zone, all the while secure in the knowledge that his family was permanently stationed in Corpus Christi.

The second edge, training, was designed to enhance both the career of this man and the organization which he served. This training, however, would be both expensive and time-consuming. LTC Sullivan estimated that, even with the proper amount of field maintenance experience, the PMO would have to expend over \$5,000 in

expenses and 120 to 400 days of training per individual. This training would have to be more extensive than that offered at any depot, for it would not only have to teach trainees industrial production line techniques, but it would also have to cross-train them in related fields and verse them in such ancillary tasks as sailboating.⁴³⁰

With the exception of plans for a host of FAMF battalions, the PMO's original organization and training scheme persisted to the end.⁴³¹ Writing late in 1966, the PM took note of this continuity, remarking that the rotating personnel training arrangement "...has been a part of the FLAT-TOP Concept of Operation since the first draft.... The tailored force....[, which it makes possible, enables] the Group Commander to assemble from both the floating and shore battalions' personnel....[those] numbers and skills required to support....[any] equipment density". In short, if you offer the men of the battalions "...the best training and courses available....[and] improve the stature of[their] senior NCO's[you will have] a facility with the maximum in unit productivity per man embarked; a facility which could be stationed, positioned, deployed or re-deployed world

⁴³⁰Ltr, AMCPM-FL, to LOG/A (MR), DCSLOG, DA, 20 Sep 65, op cit. See fn 137 with 2 Incl, Recommended Personnel Replacement Plan, Floating Aircraft Maintenance Facility (Project FLAT-TOP), and Schedule of Spaces Required. (Inclosures not previously cited).

⁴³¹The FAMF retained its SBN and TNG battalions at strength even during its phasedown. See Msg, CO, ARADMAC, to CG, AVSCOM, c. 7 Oct 71, Subj: Manpower Utilization Survey - USA Materiel Group Number 1 and the USA Transportation Corps Battalion (AMD) (SBN) (TNG), dated 4 Oct 71.

wide without a break in operational capability...."⁴³²

Funds Procurement

The procurement of funds, as the recruitment of personnel, started and proceeded favorably. The conversion dollars, even with a more than 500 percent cost overrun, were, despite some pesky delays, readily obtained, and no one seemed to blink at the \$8 million annual ship operating costs. Another favorable FAMF pattern seemed to be set, continuing directly into a positive initial response on \$17 million in PEMA funds for the second conversion, the USS Curtiss.⁴³³

The subsequent FAMF-II proposal setbacks adversely affected further conversion PEMA funding. These setbacks, however, proved to be anomalies, for the PMO was always able to get monies for other projects, such as the construction of the barracks at Corpus Christi or for BP2300 funding. The setbacks, indeed, had no anti-FAMF basis in themselves. The FAMF conversions were sidetracked not so much for a lack of funds as for the FAMF-1's apparent non-cost-effectiveness.

The strength of this assertion easily demonstrated itself during early second FAMF-II proposal efforts. On 10 February 1967, the AMC threatened to cramp such efforts by placing strict overtime controls

⁴³²Ltr, LTC John F. Sullivan, 25 Nov 66, op. cit., pp [1]-3.
See fn 60.

⁴³³Ltr, Mr. Louis M. Morehead, Ass't Dir of Mat'l Acqn, DCSLOG, DA, to AMCMR-CO, 29 Oct 65 Subj: PEMA Reprogramming Action for FY 1966 (Floating Aircraft Maintenance Facility).

on its Headquarters.⁴³⁴ This move limited the FLAT-TOP Field office to \$1,500.00 for the third quarter,⁴³⁵ an action which would have prohibited completion of the Currituck PCR work as per its 1 July 1967 due date. The Field Office immediately appealed,⁴³⁶ and the PM soon won GENERAL Besson's personal endorsement of overtime requirements for second facility pre-planning.⁴³⁷

Another demonstration of this assertion surfaced in 1968. In September of that year, the second year of the FAMF's switch to BP2300 funding, the AMC discovered that the FAMF was not obtaining reimbursements for the manufacture of parts and equipment with BP2300 funds. Normally, depots were required by regulation to demand that customers provide funded requisitions for such manufactures. The solution, of course, was an exception; the AVCOM set up PEMA Secondary Item and Stock Fund accounts specifically to reimburse the FAMF. The FAMF was thus relieved from a situation in which it would have been "...very embarrassing to expect funded requisitions from the FAMF

⁴³⁴DF, MG Selwyn D. Smith, Jr., C of S, AMC, to Dirs & Ofc Chs, HQ, AMC, 10 Feb 67, Subj: Control of Overtime Within HQ, AMC.

⁴³⁵MFR, Mr. Elmo M. McKinney, Asst for Programs, PMO, Subj: 3rd Quarter FY 67 Overtime Limitation.

⁴³⁶Ltr, LTC Robert A. Filby, Ch, FLAT-TOP Fld Ofc, to CO, ARADMAC, 17 Feb 67, Subj: Overtime for ARADMAC Personnel - TDY to USNS CORPUS CHRISTI BAY.

⁴³⁷DF, LTC Robert A. Filby, Ch, FLAT-TOP Fld Ofc, to PMO, 27 Feb 67, Subj: Overtime Requirements - 4th Qtr FY 67.

customers now and very cumbersome and uneconomical to process".⁴³⁸

MSTS Services Enlistment

Although it did face a certain amount of interservice intransigence, the PMO achieved almost as much success with the MSTS as it had done in its own dealings with higher Army echelons. This success, once more, became established in the beginning, when the PMO secured both those numerous naval support services required in the conversion of the FAMF and the training of its crew, and when the PMO obtained 155 extra personnel needed by the Navy to man the ship.⁴³⁹ Subsequent PMO-MSTS dealings continued in the same affirmative vein. A co-operative FLAT-TOP cross-service agreement was ironed out,⁴⁴⁰ advice and monies were obtained for ship modifications and repairs,⁴⁴¹ and Navy cooperation was obtained in numerous ship searches for further FAMF candidates.

⁴³⁸MFR, Mr. G. L. Bupp, Asst for Progs, 16 Oct 68, Subj: FAMF Funding.

⁴³⁹Ltr, CNO, to CSA, 17 Jul 64, Subj: Floating maintenance facility for Army aviation.

⁴⁴⁰MFR, AMCPM-FL, 2 Feb 65, Subj: Cross Service Agreement Meeting, 2 Feb 65.

⁴⁴¹(1) Ltr, LTC John L. Gardner, DPM, FLAT-TOP, to Dir of Transp, ODCSLOG, DA, 28 Oct 66, Subj: Ship Modifications or Equipment Repairs, USNS CORPUS CHRISTI BAY. (2) Ltr, CMDR, MSTS to Dir of Trans, ODCSLOG, DA, 27 Jun 66, Subj: FY 1967 Project Ship Funding Authority; request for. (3) Ltr, CMDR, MSTS to Dir of Trans, ODCSLOG, DA, 18 Jun 68, Subj: FY 1969 Project ship funding authorization; request for.

Privilege Challenged: 1968 - 1969

Introduction

The PMO's string of successes, however, had no solid foundation. To obtain any real validity, these successes had to serve not as accomplishments in themselves, but rather as complements to a series of PCR approvals of more FAMF's. Such approvals were not forthcoming, and, after the PMO was dis-established in 1969, the whole FLAT-TOP attitude switched to the defensive.

This attitude had lengthy antecedents. The FAMF project, as we have seen, had always had its opponents, and their main objections had always revolved about the FAMF's cost. Until a FAMF was built and became operational, however, these objections had naught but theoretical bases.

When the Albemarle entered the Charleston Naval Shipyard (CNSY), theory began to be reinforced by fact. The vessel's conversion costs literally started to multiply, and the projected operational costs began to grow, too. After the ship left for Vietnam, more incidentals came in. Among them were: first, extensive modifications, to include air conditioning installations; second, long yard periods, to make equipment modifications and to remove marine fouling; and, third, frequent off-station periods to check further marine growths and to keep the ship's crew ready. All of these incidentals led, either indirectly or directly, to more costs. The off-station time, for example, hindered production, and the 1969 Sasebo yard period above cost over \$500,000, excluding

production.

The FLAT-TOP PMO had, thanks to LTC Sullivan's blanket - planning approach, anticipated many of these objections. It was ready to explain, as examples, that it had calculated the off-station time into its cost-effective figures, that it had anticipated the later modifications, and that it had not expected to go into full production in its first year of operation. What it could not explain, however, was how it was more cost-effective than a comparable land-based facility.

The PMO could not explain this because, to the DA at least, it was inexplicable. There was seemingly no way, at the higher level, that one could account for the FAMF's \$8 million or more in annual overhead costs. A land-based facility did not need 150-odd MSTs crewmen to run it, and it did not need to go into drydock to have barnacles scraped off its hull. It had to be cheaper.

The PMO's initial mistake was to insist otherwise, and it compounded this mistake by persisting to insist. Year after year, from 1965 to 1969, the PMO solicited, mainly from the APJ, a mass of self-defeating FAMF cost-effectiveness data. Time after time, as we have seen, this data, together with accompanying FAMF-II proposals, met setbacks.

Why? There were three main reasons why:

First, the PMO continued to play a set line-up, even though that line-up had repeatedly demonstrated its inability to stop chasing the cost-effectiveness curves. The PMO should have, instead, concentrated its arguments upon those FAMF qualities, such as mobility and

flexibility, which added up to one cardinal military virtue: readiness. Readiness had no real price tag: an airmobile division commander, for example, would not be likely to question an \$8 to \$12 million annual overhead cost for a ship that, subject to steaming time, could support all 475 of his aircraft during the initial stages of a beach-head operation. Nor would any commander, probably, dispute the FAMF's value in an island campaign.

Second, the FAMF was not put to its proper use in Vietnam. Normally anchored at Vung Tau, the FAMF only rarely demonstrated that mobility and flexibility inherent in its readiness potential. The FAMF became, in effect, a fixed facility that had to have special repair candidates sent out to it and that had to go out of production periodically. These exceptions made the FAMF seem both more costly and increasingly superfluous, especially after the shore bases achieved a capacity that made the FAMF's absence almost unnoticeable.

Third, the FAMF operated within a steadily challenging conceptual framework. The FAMF was, in a sense, a World War II answer to a modern problem. When the FAMF came out of the CNSY, the Army aircraft program was still relatively small, and the logistical support mechanism of these aircraft was quite primitive. Gradually, as the aircraft and their support grew in size and complexity, the FAMF, given its relatively fixed station, became less and less important. Even the FAMF's flexibility came into question, for the larger air transports used by the Army suggested that FAMF-like facilities could be flown, not steamed, around the world, and that the employment of these facilities would not be limited to the world's coastlines.

In summary, the PMO should have dwelled on the FAMF's world-wide strategical and tactical possibilities and avoided the cost-effectiveness trap. The question should not have been whether the FAMF was cheap or not.⁴⁴² The question should have been whether it was needed or not. At least in the early years, the answer probably would have been yes, for the FAMF concept did have a unique promise. By not concentrating upon this concept, the PMO lost any chance of getting its FAMF fleet.⁴⁴³

What Now, FAMF-1?

The PMO also, for much the same reasons, lost the FAMF-1. In one sense, this was a matter of self-blame. By linking the fortunes of the FAMF-1's cost-effectiveness to the FAMF-II proposals, the PMO fatally compromised its initial ship. In another sense, it was not the PMO's fault; the Vietnam War tied the FAMF down, de-emphasizing those strategic and tactical qualities which made it so unique. Whether it was the PMO's fault or not, both of these senses came together in time,

⁴⁴² For an example of the PMO's cost-effectiveness fixation, see MFR, LTC John F. Sullivan, 8 Dec 65, Subj: Contract Study - Capability and Proficiency Evaluation of Project FLAT-TOP.

⁴⁴³ For an inside look at the DA views of the FAMF, the author is indebted to: Interview, COL William B. Crowell, Ch, Weap Sys Mgt Ofc, HQ, AVSCOM, with Howard K. Butler, 18 April 1975. COL Crowell sat in both camps, first as the FAMF's devil's advocate in ODCSLOG, then as Battalion Commander of the SNB BN, 1971-1972.

Note: COL Crowell's point about the beachhead and island values of the CCB does not consider a possible usurpation of the role played by, for example, a Marine helicopter repair ship, the USNS Thetis Bay.

and a new line of thought appeared. This thought train argued that, if the FAMF were not cost-effective, and if it could go off-station without being missed, why did it need to be kept?

Peacetime Utilization: FAMF-1 Study Prologue

Why indeed? It did not take long for these senses to link, and the PMO, oddly, was the uniter. In May 1967, the PMO conducted a peacetime utilization study of the FAMF. The purpose of this study was to make recommendations on the post-Vietnam disposition of the ship, to include both possible deployment and such requirements as machinery exercising, drydocking manning, and budgeting.⁴⁴⁴

The PMO's efforts worked their way into an on-going ARADMAC task called the Aeronautical Depot Maintenance Management, or "Buch Board",⁴⁴⁵ Study. The Buch Board Study was an attempt to improve various management practices at the ARADMAC. Seventeen recommendations resulted, one of which was Annex N, the "Concept and Role of the Floating Aircraft Maintenance Facility (FAMF)".

Annex N was a thorough-going FAMF apologia. It described the FAMF as a "highly mobile, industrial type facility which" gave "the task force commander depot skills and equipment [that he] would not otherwise" have. Because of its capabilities, the Annex went on, the

⁴⁴⁴Project FLAT-TOP, Project Manager's Charter, Washington, D. C., 19 May 67.

⁴⁴⁵After the ARADMAC Commanding Officer, COL Floyed Buch (16 Jul 1964 - 31 December 1967).

"FAMF must be accorded its special status as a depot level contingency force unit" in "the Five Year Master Plan." The Annex concluded that the FAMF should retain both its special operational relationship with the ARADMAC and its present command - operational control arrangement. The Annex ended with the recommendation that the AMC adopt and promulgate the following FAMF peacetime CONUS concept role:

(1) Primary mission as an AMC contingency unit to provide a highly trained and ready floating aircraft depot maintenance capability.

(2) Secondary mission to provide a limited augmentation to the CONUS aircraft depot maintenance mission under the operational control of AVCOM.⁴⁴⁶

The ARADMAC briefed the AMC and the DA on Annex N on 3 and 5 January 1968, respectively. Both were favorably impressed,⁴⁴⁷ and the PMO, as might be expected, gave the Annex its concurrence.⁴⁴⁸

⁴⁴⁶ Annex N, "Concept and Role of The Floating Aircraft Maintenance Facility (FAMF)."

⁴⁴⁷ DF, COL Karl H. Zornig, Ch, Aircraft Div, HQ, AVSCOM, To AMCIS et al., 11 Jan 68, Subj: Briefing - 5 Year Plan for Programmed Aeronautical Depot Maintenance.

⁴⁴⁸ (1) DF, BG John P. Traylor, Dir of Maint, HQ, AMC, to AMCPM-FL et al., 15 Feb 68, Subj: Analysis of Annex N of the Aeronautical Depot Maintenance Management Study, with 4 concurring Incls. (2) DF LTC H. B. Blanchard, Jr., DPM, FLAT-TOP, to AMCMA - C/4, 7 May 68, same subject.

The MSTS also responded, proposing a conference at HQ, MSTS. This conference would begin that planning needed to assure the operational readiness of the FAMF in peacetime.⁴⁴⁹ The PMO, however, was not yet ready for such a conference.

Though put to no immediate use, the MSTS letter did further serve to focus the PMO's study at the AMC/DA attention level. On 2 February 1968, the AMC put its approval on the PMO's proposal, suggesting that the DA include the FAMF in its Army Strategic Capability Plan (ASCP). The CONARC was also in full agreement, recommending that "...the FAMF be incorporated into AMC contingency plans to provide prompt logistic and administrative support specifically to the MEAFSA/LANTCOM areas and other areas in general..." and that the AMC "...should explore the possibility of placing a resupply package aboard the FAMF to support a brigade force, Airborne or Infantry, which may be required to deploy any place in the world, but probably to the Middle East or Africa."⁴⁵⁰

The AVSCOM supplemented the AMC's ASCP inclusion proposal with its own plan. As a result of AVSCOM - 1st Materiel Group discussions, the AVSCOM decided to construct a FAMF Five-Year Plan. Towards this end, it arranged for a 7 August 1968 conference at the ARADMAC.

The conference had no substantive results, but it did reveal some inner AMC thought about the future disposition of the FAMF. Basically,

⁴⁴⁹Ltr, John M. Alford, Deputy, MSTS, to CG, AMC, 24 Jan 68, Subj: USNS Corpus Christi Bay (T-ARVH-1), peacetime utilization.

⁴⁵⁰1st Ind, CPT O. Ashley, Ass't AG, CONARC, to AMCPM-FL, 7 Mar 68, Subj: Inclusion of USNS Corpus Christi in Contingency Plans.

this thought followed a pattern: procure funds from the DA, use these funds to base the FAMF at Corpus Christi, and workload the FAMF there, in a readiness state, from, and through, the ARADMAC. The AVSCOM believed that the last three years of its plan, FY's 1971 - 1973, would see the FAMF already at the ARADMAC.⁴⁵¹

⁴⁵¹[MFR], AMSAV-FDD, 7 Aug 68, Subj: FAMF 5 Year Plan Conference.

CHAPTER V THE FAMF

HOMEFRONT: MANAGEMENT, 1969-1971

FAMF Peacetime Transition Studies

Initial Phase-Down Study Actions

The AVSCOM's estimate was, at a minimum, pre-mature, but it did mark the start of actions to bring the FAMF home. The PMO followed the estimate with a full-scale peacetime utilization plan, which appeared on 12 February 1969. The plan, borrowing heavily from its May 1967 predecessor, stressed the following points: first, a continuous future requirement for the CCB's services; second, the preservation, intact, of the FAMF's mission and peacetime role concept; and, third, the maintenance of the FAMF - ARADMAC relationship.

This final point was the central argument. For the FAMF, the ARADMAC was indispensable, not for workloading, but for training. The May 1967 study had considered four other locations: Stockton, California; Charleston, South Carolina; Mobile, Alabama; and Philadelphia, Pennsylvania. The study dismissed all four, because, though they could workload the FAMF, only the ARADMAC could offer the necessary maintenance training.⁴⁵²

⁴⁵²(1) Ltr, LTC Gordon F. Wood, Ch, FLAT-TOP Fld Ofc, to AMSAV-L-F (NMP), 12 Feb 69, Subj: Peacetime Utilization Plan, USNS CORPUS CHRISTI BAY (T-ARVH-1), with 1 Incl, Project FLAT-TOP Peacetime Utilization Plan USNS CORPUS CHRISTI BAY (FAMF-1), 12 Feb 69. (2) Project FLAT-TOP, 19 May 67 PM Charter, op. cit.

PMO Study Role

The PMO's strong proponency had, as we have seen, shifted from FAMF-II proposals to the advocacy of an indefinite utilization of the FAMF-1. As long as the PMO itself was behind this shift, it had a good currency. The PMO, however, would not be behind the shift for long, for it would soon be de-projectized.

Not long after the February 1969 plan appeared, the PMO's fate was decided. On 10 March 1969, GENERAL Frank S. Besson, the PMO's long-time friend, relinquished the command of the AMC to his successor, GENERAL Ferdinand J. Chesarek. GENERAL Besson, who had counted FLAT-TOP as a "pet project," had been an extraordinary commander who had kept abreast of many subjects; 197 "managers" were reporting to him at his departure. One of these was the PMO.

GENERAL Chesarek was more of a traditionalist, and the first thing on his agenda was to cut the span of control. Since over 80 of the 197 direct reportees were PM's, these were obvious targets. Only the most important would survive.

The PMO made a determined, but eventually unsuccessful, attempt to be one of the survivors. On 9 April 1969, the PMO released a staff study to show what should happen to itself. Beginning with the assumption that its mission was indispensable, the study listed four alternatives for its future: one, continue as is; two, continue as a PMO, but at the commodity command level; three, continue as a PMO, but under the Directorate of Maintenance, HQ, AMC; and, four, become a separate agency within the Directorate of Maintenance. The study recommended that

alternative one be approved.⁴⁵³

Deprojectization

The FAMF PMO did not succeed in its appeal, but its failure had not been unanticipated. In May 1968, the AVSCOM began a series of actions slated to bring the project under its control. In six months, these actions spanned the inclusion of the FAMF into the BP2300 framework, the establishment of AVSCOM Procurement Number's (PRON's) for the FAMF, the construction of a format for FLAT-TOP reporting to the AVSCOM, and the schematization of a peacetime role for the FAMF.⁴⁵⁴ By 1969 the AVSCOM was, therefore, ready to ingest the whole PMO structure.

The AVSCOM was none too soon. On 27 August 1969, the AMC informed the PMO that it was among several AMC PM activities that would be dis-established.⁴⁵⁵ Six days later, on 2 September 1969, the AMC clarified its announcement, informing the PMO that it had directed the AVSCOM to prepare MTDA's and plans to carry out the FAMF mission after dis-establishment.⁴⁵⁶

On 8 October 1969, the AMC issued the formal order abolishing the

⁴⁵³LTC H. B. Blanchard, Jr., DPM, FLAT-TOP, Staff Study, Washington, D.C., 9 Apr 69.

⁴⁵⁴[Dir of Maint?], HQ, AVSCOM, c. 20 Oct 68, Subj: Action taken to bring Flat Top under AVSCOM Control.

⁴⁵⁵Ltr, GEN Ferdinand J. Chesarek, CG, AMC, to AMC PMO's, 27 Aug 69, Subj: AMC Project Manager Guidance.

⁴⁵⁶MFR, LTC H. B. Blanchard, Jr., DPM, FLAT-TOP, 3 Sep 69, Subj: Status of Washington Office, Project FLAT-TOP.

PMO. Effective 31 October 1969, this order⁴⁵⁷ discontinued the Washington office and transferred the FAMF's logistic functions to the 1st Materiel Group.⁴⁵⁸ The PMO's personnel spaces went to the AVSCOM on 3 November 1969.⁴⁵⁹

The changeover to AVSCOM control required more than seven months to complete. The remaining key actions consisted of the discontinuance of the Project FLAT-TOP Field Office, on 12 January 1970;⁴⁶⁰ the assignment of the US Materiel Group No. 1 (Logistic Support) to the AVSCOM, on 14 April 1970;⁴⁶¹ and the further assignment of the materiel group to the ARADMAC, on 5 May 1970.⁴⁶² This arrangement held until the FAMF returned from Vietnam.

AVSCOM - Study Manager

The dis-assembly of the FLAT-TOP apparatus, hard on the rejection of the latest FAMF-II proposal, put the FAMF's fate in the AVSCOM's keeping. The AVSCOM, of course, had broader interests, but it did seem to have a genuine concern for the ship, if not for the concept. It

⁴⁵⁷AMC GO #184, 8 Oct 69.

⁴⁵⁸Ltr, COL Morgan C. Light, PM, FLAT-TOP, to CG, AVSCOM, 31 Oct 69, Subj: Discontinuance of Project FLAT-TOP.

⁴⁵⁹AMC Manpower Authorization Voucher (MAV) FY70-1 (PM-5), 3 Nov 69.

⁴⁶⁰AMC GO No. 3, 12 Jan 70.

⁴⁶¹AMC GO No. 81, 14 Apr 70.

⁴⁶²AVSCOM GO No. 60, 5 May 70.

seconded the final PMO Peacetime Utilization Plan, which was to place the FAMF in a 72-hour readiness posture at Corpus Christi,⁴⁶³ and it soon launched a major FAMF study of its own.

The AVSCOM study was known as the Evaluation of the Floating Army Maintenance Facility - AMC 70-90 (H-6). A sub-task of a larger AMC Project, this study was charged with the determination of the cost and performance effectiveness of the FAMF. The study was to use the ship's FY 1969 performance data to make this determination. Then, based upon its results, and upon a comparison of alternative deployment methods, the study was to recommend what disposition should be made of the FAMF.

The study dragged on into March 1970. There were two reasons for this consumption of time: first, the study followed a lengthy process of data identification, comparison and analysis. Second, the study addressed eight FAMF disposition alternatives. These eight were: first, re-location of the FAMF from the combat zone to an adjacent area; second, maintenance of the FAMF in a 72-hour alert status at Corpus Christi; third, maintenance of the FAMF in a 60-day ready reserve status at Corpus Christi; fourth, maintenance of the FAMF in a 72-hour alert status at Corpus Christi and substitution of its lost capabilities in the RVN and the CONUS; fifth, storage of the FAMF at Corpus Christi and replacement of its lost capabilities; sixth, the return of the

⁴⁶³Msg, Mr. Walter M. Lorenz, Ch, Pol, Plng & Progs Div, HQ, AVSCOM, to CO, ARADMAC (SAVAE-MPO), 23 May 69, Subj: Peacetime Utilization Plan, USNS Corpus Christi Bay (T-ARVH-1), w. 2nd Ind, COL Marion W. Parks, Jr., Dir of Maint (NMP), HQ, AVSCOM, to Ch, FLAT-TOP Fld Ofc, 14 Jul 69, same Subj.

FAMF to the MARAD; seventh, co-location of the FAMF with an AMC Overseas Aviation Overhaul Facility; and, eighth, dockage of the FAMF in the RVN in a 60-day readiness status.

The study found that the FAMF was a very costly ship. The ship was workloaded improperly, had no production line capability, diverted resources to fabricate and repair NORS parts, and required a high overhead for Navy support. Therefore, except for alternatives two and four, the study concluded that any substitution for the present method of operation would be cheaper.

More than counterbalancing these faults, though, were indications that the FAMF was providing substantial tangible and intangible benefits:

The former consisted of a one percent decrease in the NORS rate, from 4.8 to 3.8 percent. Expressed in another way, this amounted to a \$16.6 million annual gain, drawn by making 200 more aircraft available for 41,000 more flying hours.

The intangible benefits were chiefly tactical and strategical. These could, in general, only be judged by the in-country combat commander in such imprecise terms as response, flexibility, capability and capacity.

Complementing these intangibles, however, were a number of variables that tended to favor the FAMF:

- first, the FAMF was a "totally recoverable" facility. Construction of a land-based, not so-recoverable counterpart would cost about \$10,928,000 and take 22 to 40 months to build.

- second, the FAMF offered an unparalleled range of technical service assets. These included complete metallurgical and chemical laboratories, a fully-stocked 35-mm aperture card technical data library, and the only competent crash damage analysis team in the RVN. During 1969, this team conducted a full analysis on 162, or 39.3 percent, of 410 USARV - produced crash - damaged exhibits.

and, third, the FAMF heavily contributed to the Theater Army Repairable Program (TARP). The TARP consisted, in 1969, of a list of 88 common aviation items considered crucial to combat operations. Of these 88, the FAMF kept 46 available, or a "0" balance.

The study therefore concluded that the FAMF was a positive asset, and it made these four recommendations:

- one, that the DA keep the FAMF, as constituted, in RVN waters.
- two , that the DA recognize the FAMF's depot - level MOSS and place them in the Army Force Structure.
- three, that the DA man the FAMF with U. S. Army military personnel.
- and, four, that the AVSCOM conduct another study to determine what aircraft could most cheaply use the FAMF in Vietnam and where the FAMF should be stationed in the CONUS for contingency and workloading purposes.⁴⁶⁴

⁴⁶⁴ AVSCOM, Cost/Performance Analysis Study of the Floating Army Facility, St. Louis, Mo., 16 Mar 70, pp. 9, 12-33, 44-45.

AVSCOM - Study Supporters

Challenge

Even while the AVSCOM FAMF Study was taking form, the FAMF's cost-effectiveness opponents were receiving more ammunition. On 25 November 1969, the U. S. Army Audit Agency (USAAA) released a strongly negative FAMF audit. Prepared by the AAA's Pacific District, the audit recommended that the FAMF be sent home. This step, the report declared, would save the Army a minimum of \$3.5 million in annual operating costs and would reduce the Army's equipment inventory in Vietnam some \$25 million.

The AAA based its conclusion on a sequential line of reasoning. When the war began, the audit postulated, the FAMF's shops and its mobility were needed. Times, however, the audit continued, changed, and by 1969 the U. S. Army had built up an enormous aircraft logistics support apparatus on the Vietnam mainland. This complex not only served every region, the audit noted, but it did it so well that the FAMF's off-station trips passed almost unnoticed. Therefore, the audit concluded, the Army could well do without the FAMF.⁴⁶⁵

Response

The unofficial audit reached AVSCOM in a week, arriving 1 December

⁴⁶⁵(1) Draft Audit, Floating Army Maintenance Facility, U. S. Army, Vietnam, USAA Pacific District, Honolulu, Hawaii, [25 Nov 69].

(2) Ltr, MG H. G. Sparrow, Chief, USAAA, to CG, AVSCOM, 25 Nov 69, Subj: Unofficial Report of Audit: Floating Army Maintenance Facility, U. S. Army, Vietnam.

1969.⁴⁶⁶ The AVSCOM initially reacted strongly. It ordered its Maintenance Directorate to "fight to keep" the ship,⁴⁶⁷ and it conducted a review of both the on-going AVSCOM FAMF Study and the use and potential of the ship.⁴⁶⁸

Succor

The AVSCOM's first response received an unexpected boost from the DCSLOG, DA. The DCSLOG was certainly aware of, and had made repeated statements about, the FAMF's limitations, in particular its high cost. Nonetheless, he believed, these costs had more than a counterbalance from a combination of the FAMF's tangible and intangible assets. The DCSLOG concluded that the FAMF should stay in Vietnam until it could be proven that its overhead costs exceeded its return costs.⁴⁶⁹

Not satisfied with this help, the AVSCOM also sought the assistance of an outside study that would use documentary evidence to support the FAMF. To procure such a study, the AVSCOM included among its study recommendations a request to re-align the FAMF study to resolve three questions: one, the ability of USARV to absorb the FAMF's work on-shore; two, alternatives to the FAMF; and, three, the phase-out and disposition of the FAMF. The AVSCOM did volunteer to participate in the study on

⁴⁶⁶ Routing Slip, MAJ Roger J. Sulzer, ASGS, AVSCOM to MG Klingenhager, e.g., AVSCOM, et al, Subj: Unofficial Report of Audit FAMF, US Army, Vietnam.

⁴⁶⁷ Routing Slip, COL Benjamin Silver, Ass't Dep for Logs Spt, AVSCOM, to COL Parks and Mr. Maulding, AVSCOM, 16 Dec 69, Subj: Command's FAMF Position.

⁴⁶⁸ Memo, LTC Vaughn C. Emerson, Dir of Main, AVSCOM, to CG, AVSCOM, 30 Dec 69, Subj: Floating Aircraft Maintenance Facility (FAMF).

⁴⁶⁹ Memo, Mr. Joseph P. Cribbins, Dir, Avn Logs, DCSLOG, DA, to ACSFOR, DA, 10 Dec 69, same Subj.

an as-required basis.⁴⁷⁰

On 16 June 1970, the AMC formally acted upon the AVSCOM's request, charging the U. S. Army Maintenance Board (AMB) with the conduct of the proposed study. The AMC instructed the AMB to follow the outlines set forth by the AVSCOM, to hold 2 study IPR's, and to complete the study for the CG, AMC, by February 1971.⁴⁷¹ The AMB acknowledged the directive on 6 July 1970.⁴⁷²

Execution of the resulting AMB study closely followed the old formula of "hurry up and wait." The AMB, under pressure, completed the study in less than six weeks, from 6 August 1970 to 15 September 1970.⁴⁷³ Preparation of the study for AMC briefing, however, took more than six months.

Not until April 1971 did the briefing occur. This briefing upon the premise that the FAMF would be withdrawn from Vietnam after FY 1972, then disposed. Within this framework, therefore, the briefing had to concentrate upon two problems: one, how to dispose of the FAMF; and,

⁴⁷⁰(1) Ltr, BG Arthur W. Kogstad, Dir of Maint, HQ, AMC, to CG, AVSCOM, 17 Apr 70, same Subj. With 1 Incl, MFR, Mr. Ben F. Wilkes, Chrmm, Strg Grp, AMCMA-EA, 14 Apr 70, same Subj. With 1st Ind, BG John P. Traylor, Actg Cmdr, AVSCOM, to AMCMA, 17 Apr 70, same Subj., with 2nd Ind, BG Arthur W. Kogstad, Dir of Maint, HQ, AMC, to AMSAV-F (L-FPSP) (NMP), AVSCOM, 17 June 70, same Subj. (2) Ltr, MG John L. Klingenhagen, CG, AVSCOM, to MG Howard F. Schiltz, US Army Transp Sch, Fort Eustis, VA, 28 Apr 70, [same Subj.].

⁴⁷¹Ltr, COL L. R. Willman, Ch, Electronics and Aviation Div, HQ, AMC, to President, USAMB, Fort Knox, KY, 16 Jun 70, same Subj.

⁴⁷²Ltr, MAJ Doane M. Wilson, Admin Offr, USAMB, to AMSAV-L (FMA) (NMP), HQ, AVSCOM, 6 Jul 70, same Subj.

⁴⁷³USAMB, Floating Army Maintenance Facility, Fort Knox, KY, 15 Sep 70.

two, how to accomplish the FAMF's workload in Vietnam after the CCB had gone. The former problem was the more significant, weighing prominently in the briefings three conclusions:

one, that early withdrawal of the FAMF from Vietnam be considered, two, that use of the FAMF for contingency purposes be considered, and, three, that the FAMF apparently could not be replaced by an airborne successor as envisioned by the Aircraft Maintenance Facility, Air Mobile (AMFAM) Concept.

Redirection

Neither the CG, AMC, nor the DCG, AMC, came to any decisions as a result of the briefing. Both expressed opinions that the AMC should consider an early withdrawal of the FAMF, and the CG stated a favorable interest in the use of the FAMF in a contingency role. The CG, did, however, direct AVSCOM to obtain more data for a later judgement. Specific figures desired included aircraft density and utilization in Vietnam, FAMF standby costs at Corpus Christi and Charleston, and more AMFAM input.⁴⁷⁴

The AVSCOM's assumption of the study manager role thus had, rather abruptly, produced an entire shift in its FAMF outlook. Instead of arguing for more ships, the AVSCOM was not only willing to concede a FAMF return from Vietnam, but it was, in effect, turning the issue

⁴⁷⁴MFR, LTC J. R. Forbes, Electronics and Aviation Div, Dir of Maint, HQ, AMC, 13 Apr 71, same Subj.

into a question whether the FAMF would have any future use at all.

The problem lay in the common denominator of AVSCOM FAMF thought. This denominator was that same cost which had always been the FAMF's biggest weakness. The result was unfortunate for the FAMF, for it slighted the only plausible justification for keeping the ship - the concept.

Nevertheless, it was the course taken, and the MSTs soon received a request for costs on positioning the FAMF in a Gulf of Mexico Port. The Navy answered this 17 November 1969 request on 26 January 1970. The Navy offered six estimate totals:

<u>Tack Taken</u>	<u>Cost</u>
Return "as is" to the MARAD	\$228,900
Remove sponsor-owned equipment, then return to the MARAD	\$397,900
Remove sponsor-owned equipment, preserve ship, and hold for future AMC use	\$761,900
Preserve ship "as is", and place in National Defense Reserve Fleet	\$654,000
Maintain ship in 60-day ready reserve status, keep all shops fully operational, and exercise ship engines	\$909,100
Maintain ship in 60-day ready reserve status, keep all shops fully operational, and supply the ship with auxiliary power from ashore	\$550,000

The Navy also offered two other alternatives to Gulf Port storage: one, give the CCB to another DOD agency; or, two, deactivate the CCB,

to include possible scrapping.⁴⁷⁵

As a supplement to, and concurrent with, its Navy request, the AVSCOM conducted yet another cost and performance analysis of the FAMF's operations in Vietnam. On 12 February 1971, the AVSCOM submitted the results of this analysis to the AMC. The analysis concluded that the CCB should be kept on-station and that the FAMF personnel structure should be left intact.⁴⁷⁶

Towards Peacetime

Further Peacetime Studies

The AVSCOM optimal FAMF position was thus, at best, a holding position; at worst, it considered the disposal of the CCB on a more than even basis. In the main, however, the AVSCOM took a middle course. It assumed that the FAMF would soon be returned from Vietnam, and it hoped that the ship could be retained in some sort of active status for future use.

It was with this middle viewpoint in the background that the AVSCOM, following the 13 April 1971 FAMF conference, resumed the FAMF peacetime utilization studies.⁴⁷⁷ On 22 April 1971, the AMC took

⁴⁷⁵Ltr, CDR, MSTS, to CO, 1st Mat'l Gp, 26 Jan 70, Subj: USNS CORPUS CHRISTI BAY (T-ARVH 1).

⁴⁷⁶Ltr, COL Delbert L. Bristol, C of S, AVSCOM, to AMCPT-SV, HQ, AMC, 12 Feb 71, Subj: Permanent Retention of the Floating Army Maintenance Facility.

⁴⁷⁷See pp. 216-17.

two momentous steps in regard to these studies. First, it requested DA guidance on the withdrawal and utilization of the FAMF. Second, it directed the AVSCOM to develop plans and cost data for two possibilities: one, workloading the CCB in either Corpus Christi or Charleston as a contingency and training base; and, two, employing the AMFAM in a DS/GS role. The AMB was to assist the AVSCOM in this effort on an "as required" basis.⁴⁷⁸

While the DA request would go unanswered for almost a year, the AVSCOM could, and did, concentrate on the AVSCOM portion of its FAMF effort. On 1 June 1971, the AMC began by clarifying the first part of the AVSCOM's task with these five requirements:

- one, current cost data of port facilities at Charleston and Corpus Christi,
- two, estimated costs for mothballing or decommissioning the CCB,
- three, method of workloading for training and production,
- four, cost of 30, 60, and 90 ship reaction capabilities,
- and, five, number of personnel necessary to support such reaction.⁴⁷⁹

The AMC formalized these requirements in a 9 June 1971 letter which directed the AVSCOM to draft two plans. One plan was for

⁴⁷⁸Ltr, COL Clyde D. Mabry, Exec. Ofr, AMCMA-R, HQ, AMC, to CG, AVSCOM, 22 Apr 71, Subj: Floating Army Maintenance Facility (FAMF).

⁴⁷⁹Memo, LTC Jesse R. Forbes, Directorate of Maint, HQ, AMC, for Dir of Maint, HQ, AMC, [c. 2 Jun 71], same Subj.

maintaining the FAMF in a contingency and training status, the other was for removing the FAMF from service.⁴⁸⁰ Later, on 21 June 1971, the AMC sharpened its original requests, asking for details on future FAMF personnel, costs and workloading. Since the follow-on requests was premised upon a mid-FY 1973 withdrawal of the FAMF from the SEA, and since it hinged upon a phase-down of the U S Army Materiel Group Number 1, the AVSCOM turned to the Group for help.⁴⁸¹

Aided by the Group, the AVSCOM forwarded the original requirement, the study plans, to the AMC on 7 July 1971. These plans considered both the Corpus Christi and the Charleston berths, as ordered, settling upon the former as the preferred site. The plans also offered four other recommendations:

- one, that the FAMF be designated a strike unit, ready to move in 60 days,
- two, that the FAMF pass from USARV to normal command channels after its return from Vietnam,
- three, that the ARADMAC workload the facility and continue its past support,
- and, four, that the ARADMAC be given authority to negotiate open-end contracts to rent berthing

⁴⁸⁰Ltr, COL Clyde D. Mabry, Exec. Ofr, AMCMA-S, HQ, AMC, TO CG, AVSCOM, 9 June 71, same Subj.

⁴⁸¹(1) Msg, AMSAV-C-B, HQ, AVSCOM, to SAVAE-CC-FM, USA Mat Gp. No. 1, 8 Jun 71, same Subj. (2) 1st Ind to 21 Jun 71 AMC ltr, COL Darwin D. Beauchamp, Dir of Plans and Analysis, HQ, AVSCOM, to CO, USA Mat Gp No. 1, 29 Jun 71, same Subj.

facilities for, and to supply utilities to, the
CCB.⁴⁸²

The AVSCOM then supplemented its plans by sending the follow-on data that the AMC had requested on 21 June 1971.⁴⁸³ Signed by the DCG, AVSCOM, on 27 July 1971, this latter AVSCOM response presented a detailed analysis of cost, workloading and personnel data for five alternatives:

Alternative I - a 30-day reaction capability, maintaining full production in all shops and using the ship's own power.

Alternative II - a 60-day reaction capability, again maintaining full shop production but using power from the shore.

Alternative III - a 90-day reaction capability, closing most shops and retaining a minimum personnel contingent.

Alternative IV - a reserve posture, mothballing the CCB, maintaining all Army equipment on-board, and stationing a personnel manning nucleus at the ARADMAC.

Alternative V - a deactivation of the FAMF, removing all Army equipment and retaining the vessel for possible future use.

⁴⁸²Ltr, BG Samuel G. Cockerham, Actg Cmdr, AVSCOM, to COL Clyde D. Mabry, AMCMA-E, HQ, AMC, 7 Jul 71, same Subj, with 1 Incl, U.S. A. Mat'l Gp No. 1 (Log Spt), Peacetime Utilization Plan, USNS Corpus Christi Bay (FAMF), Corpus Christi, TX, c. 1 Jul 71.

⁴⁸³DF, COL Darwin D. Beauchamp, Dir, Plans and Anal Dir, to CG, AVSCOM, 21 Jul 71, Subj: Floating Aircraft Maintenance Facility (FAMF).

Alternative I would require 365 military on-board and nine at the ARADMAC; Alternative II, 296 and nine, respectively; and, Alternative III, 201 and nine, respectively. Workloading, if any, would be the same as at any CONUS depot. Costs would depend upon the alternative chosen, ranging downwards from I as the most expensive to V as the least. All alternatives would result in both the deactivation of the Materiel Group, to be done in six months, and in the phase-out of the training battalion, to be accomplished in one year.⁴⁸⁴

Studies Orientation

As the alternatives would indicate, the basic AVSCOM study position was phase-down-if not out. This position was, of course, dictated to the AVSCOM by the study requirements set upon it by the AMC. Nevertheless, it must be noted that the AVSCOM began to look upon the whole FAMF matter as an action increasingly out of its hands.

Which it was. On 22 July 1971, MG James A. Kalergis, Deputy Commanding General for Logistics Support (DCGLS), HQ, AMC, received, at his request, a briefing on the two FAMF contingency/disposal plans.⁴⁸⁵ Noting that CINCUSARPAC only specified that the FAMF remain till mid-FY 1973, MG Kalergis directed that actions be initiated to phase out

⁴⁸⁴Ltr, BG Samuel G. Cockerham, Actg Cmdr, AVSCOM, to COL Clyde D. Mabry, AMCMA-S, HQ, AMC, 27 Jul 71, same Subj, with 1 Incl, Force Structure for the 1st TC Battalion (AMD) (SBN) and Annex C, Training Battalion Phaseout. (The original Force Structure had six annexes, A through G. Only C remains.)

⁴⁸⁵Memo., MG James A. Kalergis, DCGLS, HQ, AMC, to Dir, Maint, HQ, AMC, 21 Jul 71, same Subj.

the training battalion.⁴⁸⁶ MG Kalergis anticipated a 1 January 1973 date for the FAMF's return from Vietnam.⁴⁸⁷

Staffing of MG Kalergis's directive consumed the next two months. Two barriers caused this delay. One was a delayed briefing on the subject to MG Charles T. Horner, C of S, AMC, and the other was yet another briefing to MG Kalergis.⁴⁸⁸ Not until September did the directive reach the DA. Not expecting a quick DA decision, the AMC decided to schedule the topic for discussion at its own 2-4 November 1971 Commander's Conference.⁴⁸⁹ On 10 September 1971, however, the Vice Chief of Staff, Army (VCSA), gave an indication of the DA's thoughts by agreeing to a 60-day readiness status for the FAMF at the ARADMAC.⁴⁹⁰

While the DA thus offered a favorable preliminary response, the

⁴⁸⁶Fact Sheet, Mr. Kenneth D. Sampson, Spec'l Proj Ofcr, Maint Dir, HQ, AVSCOM, to Dir for Maint, HQ, AVSCOM, 11 Aug 71, same Subj.

⁴⁸⁷MFR, COL D. M. Smith, Actg Exec. Ofcr, AMCMA-S, HQ, AVSCOM, 28 Jul 71, same Subj.

⁴⁸⁸(1) Fact Sheet, Mr. Kenneth D. Sampson, Spec Proj Ofcr, Maint Dir, HQ, AVSCOM, to Dir for Maint, HQ, AVSCOM, 11 Aug 71, Subj: Floating Aircraft Maintenance Facility - FAMF. (2) Memo, Mr. Kenneth D. Sampson, Spec Asst to Dir for Maint, HQ, AVSCOM, to Dir for Maint, HQ, AVSCOM, 19 Aug 71, Subj: FAMF.

⁴⁸⁹Fact Sheet, Mr. Harry J. Dodd, Ch, Pol, Plans & Prog Div, Maint Dir, HQ, AVSCOM, to Dir for Maint, HQ, AVSCOM, 10 Sep 71, Subj: Phase Down/Phase Out of Floating Army Maintenance Facility (FAMF).

⁴⁹⁰Routing and Transmittal Slip, Mr. William H. Barthel, Dep Dir for Maint, HQ, AVSCOM, to COL William G. Phillips, Jr., Dir for Maint, HQ, AVSCOM, 10 Sep 71, Subj: [FAMF].

AVSCOM set out to obtain even more support. The first step involved the procurement of FAMF peacetime utilization fact sheets for the AMC Commander's Conference⁴⁹¹ and for the CG, AVSCOM.⁴⁹² The next move concerned the solicitation of favorable comments and recommendations from the Director of Army Aviation,⁴⁹³ from the Aviation Officer, USARV,⁴⁹⁴ and from the CO, 34th General Support Group, USARV.⁴⁹⁵

The second step was not entirely successful. COL Donald H. Jersey, the CO, 34th General Support Group, did not have a good opinion of the FAMF. COL Jersey offered two alternatives for the FAMF's future use: one, give the FAMF to the Australians for \$1.00 per year, to use or maintain; or, two, take the equipment and personnel off the ship, from a small repair center at Vung Tau, and duplicate the ship's work there. COL Jersey also obtained, by direction, a list of FAMF equipment that could be removed without

⁴⁹¹Fact Sheet, LTC Gordon F. Wood, Actg Cmdr, USA Mat Gp. No. 1, to CO, ARADMAC, 1 Oct 71, Subj: Peacetime Utilization Plan, USNS CORPUS CHRISTI BAY.

⁴⁹²Fact Sheet, Mr. Robert R. Coffing, Dir for Maint, to CG, AVSCOM, 27 Oct 71, Subj: Peacetime Utilization Plan, USNS Corpus Christi Bay (FAMF).

⁴⁹³Ltr, BG Samuel G. Cockerham, DCG, AVSCOM, to BG William J. Maddox, Jr., Dir of Army Avn, OACSFOR, 3 Dec 71, [same Subj.].

⁴⁹⁴Ltr, BG Samuel G. Cockerham, DCG, AVSCOM, to BG Robert M. Mackinnon, Avn Ofcr, USARV, 3 Dec 71, [same Subj.].

⁴⁹⁵Ltr, BG Samuel G. Cockerham, DCG, AVSCOM, to COL Donald H. Jersey, CO, 34th Genl Spt Gp, USARV, 3 Dec 71, [same Subj.].

drydocking the ship.⁴⁹⁶ The DCG, AVSCOM letter to COL Jersey, noted previously, was for the express purpose of altering his opinion.⁴⁹⁷

DA Response

Despite opposition such as COL Jersey's, the AVSCOM appears to have "sold" the DA on the FAMF's merits, particularly its contingency value and its unrivaled collection of technical skills. On 3 March 1972, the DA affirmed its favor, stating that the

. . . . FAMF (USNS Corpus Christi Bay and 1st TC Bn) will be retained in the force structure as an AMC unit in a 60-day readiness condition at a strength level of 210 military personnel. The USNS Corpus Christi Bay will be maintained in an operational status at Corpus Christi, Texas, and utilized for support of worldwide contingencies and training.

3. Upon return of the FAMF to CONUS, HQs, 1st Materiel Group and the USA TC Battalion (AMD) (S) (Tng) will be deactivated. Planning and control functions now performed by the 1st Materiel Group will be performed by the 1st TC Bn. . . .

⁴⁹⁶Memo, CO, ARADMAC, to COL William G. Phillips, Dir for Main, HQ, AVSCOM, 27 Oct 71, Subj: FAMF, Future Status.

⁴⁹⁷DF, COL William G. Phillips, Dir for Maint, HQ, AVSCOM, to DCG, AVSCOM, 17 Nov 71, Subj: Personal Letter from the Deputy Commanding General to Colonel Jersey.

4. AMC will budget for general administrative expenses and support personnel (BP2) and for depot maintenance (BP7M). DA, DCSLOG will budget for ship operations costs (BP7S).⁴⁹⁸

Withdrawal Preparations

The DA decision made, AVSCOM management interest shifted towards two types of planning. One, the more immediate, involved the phase-out of now - unneeded personnel. The other concerned the future use of the FAMF at the ARADMAC. The Directorate for Maintenance, HQ, AVSCOM, was responsible for both types of planning.⁴⁹⁹

Planning responsibilities were minor, in any case. Clear outlines had been set, both for the ship - which was to be returned from Vietnam and held in a 60-day readiness status - and for the men, who were to be reduced by eliminating the training battalion and the group. The AVSCOM's Personnel Directorate did suggest one deviation from this plan, an early absorption of the Group's mission by the ARADMAC.⁵⁰⁰ The

⁴⁹⁸Ltr, MG Verne L. Bowers, TAG, DA, to CG, AMC, 3 Mar 72, Subj: Floating Army Maintenance Facility (FAMF).

⁴⁹⁹(1) Memo, COL William G. Phillips, Dir of Maint, HQ, AVSCOM, to AMSAV-FP et al., 13 Mar 72, Subj: Implementation of Planning for Return of the FAMF to ARADMAC. (2) MFR, Mr. William H. Barthel, Dep Dir of Maint, HQ, AVSCOM, 23 Mar 72, Subj: Return of FAMF to CONUS.

³⁰⁰(1) AVSCOM Staff Directory, 26 Aug 71. (2) Memo, Mr. Ralph A. Stege, Ch, Utiln Br, Dir for Pers, Trng & Force Dev, HQ, AVSCOM, for Ch, For Dev Div, Dir for Pers, Trng & For Dev, HQ, AVSCOM, 28 Sep 71, Subj: Manpower Utilization Survey - USA Materiel Group Number 1 and the USA Transportation Corps Battalion (AMD) (SBN) (TNG). (3) DF, Mr. Clyde V. Chapman, Ch, For Dev Div, Dir for PT&FD, HQ, AVSCOM, to Dir of Maint, HQ, AVSCOM, 4 Oct 71 same Subj.

Maintenance Directorate, however, rejected this suggestion, and it continued to base its plans on the outlines laid down by higher headquarters.⁵⁰¹ This decision completed the arrangements for the FAMF's return, a return that now only awaited the ship's release from Vietnam.

⁵⁰¹DF, COL William G. Phillips, Dir of Maint, HQ, AVSCOM, to AMSAV-RM, HQ, AVSCOM, 23 Nov 71, same Subj.

CHAPTER VI THE FAMF:

RETURN AND DISPOSITION, 1970 - 1975

Return, 1970 - 1972

The Final Vietnam Years

Production

The FAMF had, as we again note on our return to 1970, peaked its production in that year. Subsequent output thereafter declined sharply during the ship's Vietnam stay, as these figures indicate:

Table 3, Comparison of FAMF Productivity, CY's 1966-1972

<u>Year</u>	<u>Serviceable Items Returned to Theater</u>	<u>Dollar Value of Items Returned to Theater*</u>
1966 (Apr-Dec)	9,378	\$ 9.9
1967	38,220	25.7
1968	39,060	38.9
1969	47,880	40.6
1970	85,884	50.9
1971	55,056	41.0
1972	<u>16,555</u>	<u>14.0</u>
Totals	292,033	\$221.0

*Expressed in millions.⁵⁰²

One reason for the sharp drop in numbers and dollar values of the FAMF output after 1970 was the Theater Army Repairable Program (TARP). The TARP's origins, as much else in the FAMF story, began within that common denominator context of dollars used as a yardstick to measure the war's progress. Seen from this view, the FAMF operation, as any other, was looked at by the theater in any way that could save money.

⁵⁰²USA Mat Gp. No. 1, Historical Summary, 15 Jan 73, op. cit., p. 7.

The way did not have to be real, for as long as the dollars were not laid out, the theater was not formally spending. Following this thought pattern, the 34th General Support Group noted that the FAMF's production fell into two classes: PEMA and Stock Funded. Items from the former class were a free issue to the theater from the NICP's; those from the latter required USARV dollars. The 34th, accordingly, decided that the only sensible course for the FAMF to follow was to concentrate upon stock funded item production.

The only obstacles were AVSCOM and DA consent. In November 1970, the 34th got an occasion to secure both. In that month, MG John L. Klingenhagen, CG, AVSCOM, Mr. George C. Dellapa, Acting Deputy Commander for Logistics Support, AVSCOM, and Mr. Joseph L. Cribbins, ODCSLOG, DA, visited the area. They proved favorable to the 34th's entreaties, and the CG directed the Battalion Commander to prepare a TARP outline to achieve the 34th's ends.

Two proposals resulted: Plan 33/6 and Plan 50/20. The former included 33 Stock Fund and 6 PEMA items; the later 50 and 20 such items, respectively. Plan 33/6 maximized FAMF production of Stock Fund lines at the expense of versatility. Plan 50/20 was more flexible, sacrificing some Stock Fund production in order to allow FAMF users to continue to capitalize on the ship's varied output capability. Both plans were expensive, requiring an additional \$1.95 million of 7M, or Stock Fund, monies from the AVSCOM.

At the battalion's suggestion, and with the aid of an appropriate

9 December 1970 directive from Mr. Cribbins,⁵⁰³ the AMC chose the 50/20 Plan.⁵⁰⁴ The AVSCOM then requested,⁵⁰⁵ and received, 50/20 details to measure their impact upon its own work.⁵⁰⁶

After the adoption of 50/20, FAMF production received only one change of any consequence before the start of pre-withdrawal phase-down operations. This change involved the transfer of FAMF workloading responsibilities from the ARADMAC to the MIDA. As such, this change constituted part of an overall AMC effort to centralize command aviation materiel workloading responsibilities. First formally discussed in a 23 November 1970 meeting at Headquarters, AMC, the change was to be implemented in FY 1972.

Implementation proceeded rapidly. The first step took place on 15 March 1971, when the AMC organized two task groups - one Procedural

⁵⁰³Msg, DCSLOG - DAL -PRRO, DA, to CG, USARV, 9 Dec 70, Subj: Realignment of Aviation Maintenance Workload on the Corpus Christi Bay (FAMF).

⁵⁰⁴Ltr, LTC Rudolph D. Descoteau, CO, 1st TC Bn (AMD) (SBN), to COL H. L. Baker, CO, USA Mat Gp. No. 1 (LOG Spt), 9 Dec 74, Subj: [TARP], with 1 Inclosure, Reorientation of FAMF Production Program, and 2 Annexes, Annex A, Glossary, Heading Terms, and Annex B, Summary of 33/6 and 50/20 Programs, 3rd and 4th Qtr Production and Dollar Requirements.

⁵⁰⁵Msg, AMSAV-L-Q (QM), HQ, AVSCOM, to CG, USARV, Subj: Realignment (sic) of Aviation Maintenance Workoak (sic) on the Corpus Christi Bay (FAMF).

⁵⁰⁶Ltr, CPT John T. Elliot, III, Adj., USA Mat Gp. No. 1 (Log Spt), to AMSAV-L-Q (QM), HQ, AVSCOM, 30 Dec 70, Subj: Realignment of Aviation Workload on the USNS CORPUS CHRISTI BAY (FAMF-1).

and one Financial - to develop a transfer formula.⁵⁰⁷ Several subsequent meetings on this subject occurred, primarily of a procedural nature.⁵⁰⁸ Finally, on 13 July 1971, the AMC issued an official requirements document for the FAMF's portion of the change, to include feeder report details.⁵⁰⁹ By mid-August 1971, the MIDA transfer was in progress.⁵¹⁰

Costs

After the FAMF's PEMA Program closed out in FY 1970, the remaining FAMF expenditures came exclusively under the O&MA category. O&MA expenditures amounted more than \$9 million in FY 1971 and over \$5 million in FY 1972. The MSTS/MSO got \$4,620,000 in the first year and \$4,306,000 in the second.

Personnel and Ship Stationing

The FAMF's personnel status remained relatively stable during FY's

⁵⁰⁷Ltr, Mr. Edwin Greiner, Asst Dep for Log Spt, HQ, AMC, to CG, AVSCOM, et al., 15 Mar 71, Subj: Procedures for Transfer of Aircraft Materiel Workload Responsibilities to the Central Workloading Activity, with 1 Incl, Procedures for Transfer of Aircraft Materiel Workload Responsibilities to the Central Workloading Activity.

⁵⁰⁸Ltr, Mr. Leland J. Springer, Comptroller, HQ, AVSCOM, to SAVAE-CP, ARADMAC, 7 Jun 71, Subj: Transfer of FY 72 Aircraft Materiel Workload Responsibility from AVSCOM to MIDA.

⁵⁰⁹Ltr, COL George E. Renault, Jr., Sp Asst to DCG for Log Spt, HQ, AMC, to CG, AVSCOM et al., 13 Jul 71, Subj: Procedure for Central Workloading of the Floating Aeronautical Maintenance Facility (FAMF), with 1 Incl., Procedure For Central Workloading Of The Floating Aeronautical Maintenance Facility (FAMF). [Ed. Note use of Aeronautical in Acronym].

⁵¹⁰DF, COL William G. Phillips, Dir for Maint, HQ, AVSCOM, to AMSAV-PP, HQ, AVSCOM, 10 Aug 71, Subj: U. S. Army Materiel Commander's Conference; w. 1 Incl, same Subj.

1971 - 1972. This stability, however, did not mean higher productivity, for the ship's unavailability rate increased. The CCB was off-station 91 out of a possible 731 days during its last two full fiscal years in Vietnam. This amounted to a 12.4 percentage, almost double FY 1970's 6.6 percentage.⁵¹¹

The first departure lasted from 1 May 1971 to 15 June 1971. Its purpose was a major drydock and overhaul of the CCB at Sasebo, Japan. On the CCB's return, it paused at White Beach, Okinawa, to re-provision.

The second absence was about as long, lasting from 15 April to 31 May 1972. Once again this ship went to Sasebo, this time for special servicing and repairs. From there the ship was to proceed to the CONUS, but, on 17 May 1972, the Group ordered the CCB back to RVN waters. As in the previous year, the ship's return voyage included a stop in Okinawa - Buckner Beach - to re-provision.⁵¹²

The CCB had, in this period, the first opportunity since FY 1967 to demonstrate its flexibility. On 5 March 1971, COL Jersey, the 34th General Support Commander, ordered the ship to move to Da Nang to support Operation LAM SON 719, a joint US-South Vietnamese invasion of Laos. The ship left for Da Nang on 9 March, arriving two days later. On 21 March 1971, the CCB, having completed its mission, left Da Nang

⁵¹¹USA Mat Gp No. 1, Historical Summary, 15 Jan 73, op. cit., pp. 6-7.

⁵¹²1st Transportation Battalion, Historical Summary 31 March 75, with 5 Annexes. Annex C, Yard Periods, p. [3].

for Vung Tau.⁵¹³

Homeward

In 1971 the AMC had decided, as we have seen, to return the FAMF to the CONUS about mid - FY 1973.⁵¹⁴ Despite DA and USARPAC concurrence with this position,⁵¹⁵ the AMC opted, on 1 February 1972, to bring the FAMF home immediately after its forthcoming April-May 1972 trip to Sasebo.⁵¹⁶ The AMC's action set into motion a flurry of responses: the AVSCOM had to prepare a final phase-out plan for the Materiel Group and the training Battalion;⁵¹⁷ the ARADMAC had to get ready to receive the ship;⁵¹⁸ the Directorate for Maintenance, HQ, AVSCOM, had to draft

⁵¹³USA Mat Gp No. 1, Historical Summary, 15 Jan 73, Annex A, op. cit, [p. 91].

⁵¹⁴See pp. 223-28.

⁵¹⁵Summary Sheet, Mr. Joseph P. Cribbins, Dir, Avn Logs, HQ, DA, [c. 1 Nov 71], Subj: Floating Army Maintenance Facility (FAMF).

⁵¹⁶Msg, AMCPT-SA, HQ, AMC to AMSAV-F, HQ, AVSCOM, 1 Feb 72, Same Subj.

⁵¹⁷
(1) Msg, AMCPT-SA, AMC, TO HQ, AVSCOM, 1 Mar 72, same Subj.
(2) Ltr, COL Robert J. Dillard, CO, ARADMAC, to AMSAV-BC, HQ, AVSCOM, 8 Mar 72, same Subj. (3) Memo, Mr. Kenneth D. Sampson, Sp Proj Ofcr, Dir for Maint, HQ, AVSCOM, to C of S, HQ, AVSCOM, 28 Mar 72, same Subj.

⁵¹⁸ARADMAC, Operation Plan I (Project Homecoming), Corpus Christi, TX, 11 Mar 72.

plans for the future use of the ship,⁵¹⁹ to include workloading it for the homeward trip;⁵²⁰ and the Material Group had to the ship home.⁵²¹

All of this action was premature. On 13 May 1972, MG Robert N. Mackinnon, CG, 1st Aviation Brigade, RVN, asked the DA to return the FAMF to RVN waters.⁵²² The DCSLOG, DA, agreed, and,⁵²³ after a six-day slippage to effect major boiler repairs,⁵²⁴ the FAMF left Sasebo on 22 May 1972 and dropped anchor off Vung

⁵¹⁹ (1) Memo, COL William G. Phillips, Dir of Maint, HQ, AVSCOM, to Ch, AMSAV-FP, HQ, AVSCOM, et. al., 13 Mar 72, Subj: Implementation of Planning for Return of the FAMF to ARADMAC. (2) MFR, Mr. William H. Barthels, Dep Dir of Maint, HQ, AVSCOM, 23 Mar 72, Subj: Return of FAMF to CONUS, w. 1 Incl., [Memo], COL Robert J. Dillard, CO, ARADMAC, [c. 22 Mar 72], Subj: Significant Planned Events Concerning Return of the FAMF from RVN TO CONUS (ARADMAC Op Plan 1). (3) Memo, Mr. Kenneth D. Sampson, Sp Proj Ofcr, Dir for Maint, HQ, AVSCOM, for Dir of Maint, HQ, AVSCOM, 31 Mar 72, Subj: Future Plans for the FAMF after its Arrival at Corpus Christi, Texas.

⁵²⁰ Memo, COL James A. Hill, Dir of Maint, HQ, DA, for DCSLOG, DA, 4 Apr 72, Subj: Floating Army Maintenance Facility (FAMF) Redeployment from RVN.

⁵²¹ LO No. 54, USA Mat Gp No. 1, 13 Apr 72.

⁵²² Msg, MG Robert N. Mackinnon, CG, 1st Avn Bde, RVN, to DCSLOG, DA, Subj: Redeployment of the CORPUS CHRISTI BAY (FAMF).

⁵²³ Msg, Mr. Joseph L. Cribbins, ODCSLOG, DA, to MG Fred A. Kornet, Jr., CG, AVSCOM, 15 May 72, Subj: Floating Army Maintenance Facility (FAMF).

⁵²⁴ (1) Msg, MG Fred A. Kornet, Jr., CG, AVSCOM, to MG Robert N. Mackinnon, CG, 1st Avn Bde, RVN, Subj: Redeployment of the CORPUS CHRISTI BAY (FAMF). (2) CO, USA Mat Gp. No. 1, to CG, 1st Avn Bde, LBN, RVN, 16 May 72, [same Subj].

Tau nine days later.

The FAMF stay lasted only five months. On 14 September 1972, the CG, USARV, announced that the FAMF could be released for departure on or after 30 September 1972. By 24 October 1972, the Commander, US Military Assistance Command, Vietnam (COMUSMACV), the CINCPAC, and the JCS had concurred with the CG, USARV's announcement. Accordingly, on 25 October 1972, the DA directed the FAMF to withdraw to its home base, there to be utilized according to the 3 March 1972 DA directive.⁵²⁵

Actual orders soon followed. On 31 October 1972, the USARPAC issued the final movement directive for the CCB.⁵²⁶ The CCB left Vung Tau harbor at 1800 hours the same day, with a complement of 198 Army men aboard.⁵²⁷ After a slow and uneventful return voyage, the FAMF arrived at Corpus Christi, Texas, on 19 December 1972.⁵²⁸

The FAMF At Corpus Christi: Homeward Preparations, March-December 1972

General

Final planning for the FAMF's Corpus Christi berthing had begun, as

⁵²⁵Msg, DAMO-ODT, HQ, DA, to CINCUSARPAC and CDR, USAMC, 25 Oct 72, Subj: 1st Transportation Battalion (FAMF).

⁵²⁶Msg, GPOP-FD, CINCUSARPAC, to CDR, USARV, MACVSUPCOM, LN BN, RVN, 31 Oct 72, Subj: Final Movement Directive, USARPAC 14-72.

⁵²⁷Msg, CDR, 1st Tn Bn (AMD) (SBN), to CDR, USA Mat Gp No. 1, 31 Oct 72, Subj: FAMF Redeployment.

⁵²⁸[Ed.], "FAMF Welcomed Home," Aircraftsmen (ARADMAC), Vol. 3, No. 49 (22 Dec 72).

we have seen, as early as February 1972. Despite the premature nature of these first efforts, they did set a pattern within which the CCB would operate in its last two years. This pattern's main features included a bare-boned organizational structure, a greatly reduced personnel complement, and an ARADMAC - regulated specialized workload. Only once would the ship break out of this pattern; this was to participate in a four-and-a-half month nuclear test exercise called Operation HULA-HOOP.

A New MOU

With the FAMF homeward bound, the most immediate AMC concern became the securing of a ship's berth. As this concern also affected the MSC, the AMC was led to the negotiation of a new MOU. The ARADMAC largely represented the AMC in this matter.

MOU negotiations began with the FAMF's false homeward start. On 19 April 1972, MSC, ARADMAC and AMC representatives met at Corpus Christi. As a result of this meeting, the representatives drafted an amendment to the original 1967 agreement, the main change in which was an agreement by the MSC to keep a minimum crew necessary for the CCB's new 60-day readiness status.⁵²⁹ The AVSCOM made a thorough review of the

⁵²⁹ Ltr, COL Robert J. Dillard, CO, ARADMAC, to AMSAV-F, HQ, AVSCOM, 20 Apr 72, Subj: Agreement with Military Sealift Command in Support of FAMF, with 1 Incl, [c. 19 Apr 72], [Draft] Memorandum of Agreement Between United States Army and Military Sealift Command Covering USNS Corpus Christ Bay When Stationed at Port of Corpus Christi.

document,⁵³⁰ recommending only minor changes.⁵³¹ The revised agreement then passed through higher channels, eventually receiving the approving signatures of Mr. Joseph P. Cribbins, ODCSLOG, DA, and Rear Admiral John D. Chase, CMDR, MSC.⁵³²

Even while the MOU was passing through AVSCOM staffing, the ARADMAC was making arrangements with the Corps of Engineers (C of E) for CCB docking space.⁵³³ By 17 May 1972, the Nueces County Navigation District⁵³⁴ had agreed to C of E terms, to include the scope of the berthing lease, the facilities to be furnished, the rent for the space-Dock Number 12, and the reimbursement for accommodation modifications.⁵³⁵ These arrangements

⁵³⁰DF, COL William G. Phillips, Dir of Maint, HQ, AVSCOM, to Comptroller, HQ, AVSCOM et al., 1 May 72, Subj: Floating Aircraft Maintenance Facility.

⁵³¹(1) DF, Mr. Leland Springer, Comptroller, HQ, AVSCOM, to Dir of Maint, HQ, AVSCOM, 11 May 72, same Subj. (2) DF, CPT Richard J. Silber, Actg Ch, Mil Law/Legal Svcs Div, LO, HQ, AVSCOM, to Dir of Main, 8 May 72, same Subj.

⁵³²Memorandum of Agreement Between United States Army and Military Sealift Command. Signed by Mr. Joseph P. Cribbins, ODCSLOG, DA, 24 Oct 72, and Rear Adm John D. Chase, MSC, 3 Nov 72.

⁵³³(1) Msg, SAVAE - G (EF), ARADMAC, to SAVIS-N, HQ, AVSCOM, 26 Apr 72, Subj: Request for Ship Berthing Facilities, ARADMAC, Corpus Christi, TX. (2) Msg, AVSCOM-F, HQ, AVSCOM, to AMCIS-MR and AMCMA-EA, HQ, AMC, 28 Apr 72, Subj: Request for Ship Berthing Facilities, Corpus Christi, Tex.

⁵³⁴Corpus Christi is the county seat of Nueces County.

⁵³⁵Ltr, Mr. James E. Ketterman, Actg Ch, Real Est Div, Fort Worth Dist, C of E, to Sthwn Div Engr, Fort Worth Dist, C of E, 17 May 72, Subj: Request for Acquisition of Ship Berthing Facilities, Corpus Christi, Texas.

were, of course, suspended soon after the FAMF had returned to RVN waters.

The suspension lasted from 6 June⁵³⁶ until 17 October 1972, at which time the ARADMAC applied for authority to renew negotiations for dock leasing and dock modifications.⁵³⁷ The ARADMAC subsequently⁵³⁸ re-opened negotiations and,⁵³⁹ on 9 November 1972, Nueces County and C of E representatives signed the necessary agreement.⁵⁴⁰

Workloading Preparations

Background. With the CCB's berthing arrangements under the ARADMAC's charge, the AMC could turn to those internal tasks needed to bring the post-Vietnam FAMF into accord with the 3 March 1972 DA guidelines. The AMC's tasks consisted of making preparations for the FAMF's workloading and for the drastic reduction of its organizational size and strength.

⁵³⁶Msg, SAVAE-EF, ARADMAC, to AMSAV-F, Mr. Samson (sic), HQ, AVSCOM, 6 Jun 72, Subj: Project Homecoming for Berthing USNS Corpus Christi Bay at Nueces County Navigation District No. 1.

⁵³⁷Msg, SAVAE-EFC, ARADMAC, to AMSAV-F, HQ, AVSCOM, 17 Oct 72, Subj: Berthing USNS Corpus Christi Bay.

⁵³⁸Msg, AMSAV-FMO, HQ, AVSCOM, to AMCIS-MR and AMCMA-EA, HQ, AMC, 20 Oct 72, Subj: Ship Berthing Facilities, Corpus Christi, Texas.

⁵³⁹Msg, SAVAE-EFC, ARADMAC, to US Army Eng Dist Galveston, Galveston, TX, 25 Oct 72, Subj: Ship Berthing Facs, Corpus Christi, TX.

⁵⁴⁰Msg, CDR, USA Mat Gp No. 1, to RHELSEA, COMSC, Wash, D. C., 10 Nov 72, [same Subj.].

The AMC's first step was to hold a meeting on 17 April 1972. Attendees at the meeting included its own representatives as well as those of the DA, the AVSCOM, the ARADMAC, and the Materiel Group. The attendees discussed several topics, most especially manning and workloading. The DA largely resolved the former, allotting 210 military spaces for the FAMF. Workloading was not as facile, and, following an AMC suggestion, the participants agreed that a workloading conference should be held at the ARADMAC to resolve procedures and to assign a FY 1973 workload.⁵⁴¹

Succeeding AMC direction was largely monitorial. The outlines to be monitored included execution of the Corpus Christi berthing arrangements, conclusion of the MSC/Army Corpus Christi operational agreement, reorganization of the FAMF personnel structure, preparation of the FAMF for its new contingency role,⁵⁴² and adumbration of a detailed ship return plan.⁵⁴³

With the AMC guidelines set, the AVSCOM and the ARADMAC could turn to the specifics of the CCB's future Corpus Christi operations, that is,

⁵⁴¹Minutes, Mr. George Turton, AMCMA-EA, HQ, AMC, [c. 18 Apr 72],
Subj: Minutes of FAMF Planning Meeting Held at AMC - Bldg T-7, 17 April
1972 - 900 Hours, with 1 Incl, [List of Attendees].

⁵⁴²[Dir of Maint, HQ, AVSCOM], FAMF, St. Louis, Mo., 21 Apr 72.

⁵⁴³DF, Mr. John B. Greenwell, Ch, Dist & Trans Div, Dir for Mat'l
Mgt, HQ, AVSCOM, to Dir for Maint, HQ, AVSCOM, 24 Apr 72, Subj:
Significant Planned Events Concerning Return of the FAMF from RVN to
CONUS (ARADMAC Op Plan 1).

personnel strength and workloading. This planning began on 20 April 1972, when the AVSCOM received AMC authority to proceed. By 8 May 1972, the AVSCOM and the ARADMAC had developed basic personnel and workloading plans, to include selection of a FY 1973 FAMF workload.

Personnel. Continuation of the FAMF concept itself aside, the predominating element in FAMF workloading was personnel strength. Upon return of the CCB, the FAMF structure was to be reduced almost three-fourths in military strength, from 782 to 210.⁵⁴⁴ This drop would include elimination of both the training battalion and its 365 spaces - 16 officer, 10 warrant officer, and 339 enlisted - and the Materiel Group and its 52 spaces - 6 officer, one warrant officer and 45 enlisted. The battalion on board the FAMF would also be cut from 365 to 210 spaces, and the five civilians in the Materiel Group would lose their jobs.⁵⁴⁵

Drastic as these cuts seemed, they did not deal a permanently damaging blow to FAMF productivity. The training battalion, after all, could not be justified for one-year rotational tour purposes with the CCB at home, nor could it be kept as a luxury device for providing a stand-by man for each man at work. The Materiel Group was likewise expendable, for a large part of its job had been to oversee the rotational sequence. Nevertheless, the AVSCOM and the ARADMAC made a concerted but

⁵⁴⁴Msg, SAVAE-G, ARADMAC, to AMSAV-BC, HQ, AVSCOM, 24 Mar 72, Subj: Floating Aircraft Maintenance Facility (FAMF).

⁵⁴⁵Msg, AMCPT-SA, HQ, AMC, to CG, AVSCOM, 19 Apr, same Subj.

unfruitful effort to save both elements by proposing that they be placed in the Army Reserve Force Structure.⁵⁴⁶

Though the Training Battalion and the Group could not be saved, the DA did provide a palliative for their loss. The DA's relief took the form of an additional ten-man civilian contingent. This contingent would offer that engineering, administrative and logistical support that would otherwise be lost with the Group's elimination.⁵⁴⁷

Based on the DA's action, the CO, ARADMAC submitted, on 8 March 1972, a plan for the use of the 220 space total. The bulk of the total, or 201 spaces, would man the FAMF by this plan, while the remaining 19 - 10 civilians and 9 military - would form the Materiel Group successor unit. This unit would be sited within the 1st TC Bn.⁵⁴⁸ On 14 March 1972, the AMC approved this plan.⁵⁴⁹

⁵⁴⁶(1) DF, COL Darwin D. Beauchamp, Dir of Plns & Anal, HQ, AVSCOM, to DCG, AVSCOM, 25 Feb 72, Subj: 1st Materiel Group, ARADMAC. (2) Memo, COL Darwin D. Beauchamp, Dir of Plns & Anal, HQ, AVSCOM, to CG, AVSCOM, 13 Mar 72, Subj: Contingency Support for the FAMF. (3) Ltr, COL Darwin D. Beauchamp, Dir of Plns & Anal, HQ, AVSCOM, to SAVAE-G, ARADMAC, 13 Mar 72, Subj: Contingency Support for the Floating Army Maintenance Facility (FAMF). (4) DF, LTC Clyde D. Allen, Actg Ch, Concepts, Doct & Plns Div, HQ, AVSCOM, to Dir of Maint, HQ, AVSCOM, 13 Apr 72, same Subj., with 1 Incl, 1st Ind, SAVAE-G, ARADMAC, to AMSAV-BC, HQ, AVSCOM, 13 Mar 72, same Subj.

⁵⁴⁷Msg, MG Fred A. Kornet, CG, AVSCOM, to LTG Woodrow Vaughn, DCG, AMC, 1 May 72, same Subj.

⁵⁴⁸Msg, SAVAE-G, ARADMAC, to AMSAV-BC, HQ, AVSCOM, 8 Mar 72, msg cited.

⁵⁴⁹Msg, AMCPT-SA, HQ, AMC, to CG, AVSCOM, 14 Mar 72, same Subj.

On 19 April 1972, however, a battle for the augmentation spaces began. At that time, the AMC not only withdrew the ten previously offered civilian spaces, but also took away the nine military spaces. The AMC based its decision on the ground that the ARADMAC could serve as an "intermediate headquarters in line of command", thus eliminating the need for another administrative element.⁵⁵⁰

The AMC's action evoked an immediate and persistent protest, the main basis of which was strategic. Citing the FAMF's world-wide contingency mission, the CG, AVSCOM informed the DCG, AMC, that the FAMF's loss of the planned additional personnel would "seriously impair" its ability to perform its duty.⁵⁵¹ To this objection the DCG made a not entirely satisfactory reply. Noting the CG's "concern," the DCG nevertheless agreed with the DA that "the loss of nine military will not seriously impact on FAMF operations." The DCG did, however, state that the ten civilian spaces would be restored,⁵⁵² as the DA had confirmed them.⁵⁵³

⁵⁵⁰(1) Msg, AMCPT-SA, HQ, AMC, to SAVAE-G, HQ, AVSCOM, 19 Apr 72, same Subj. (2) MFR, Mr. Kenneth Sampson, Spec Projs Ofcr, Dir of Maint, HQ, AVSCOM, 20 Apr 72, Subj: Trip Report - FAMF (17 Apr 72).

⁵⁵¹Msg, Kernet to Vaughn, 1 May 72, msg cited.

⁵⁵²(1) Msg, LTG Woodrow Vaughn, DCG, AVSCOM, to MG Fred A. Kernet, CG, AVSCOM, 1 May 72, Subj: Floating Aircraft Maintenance Facility (FAMF). (2) MFR, Mr. Kenneth Sampson, Sp Projs Ofcr, Dir of Maint, HQ, AVSCOM, 3 May 72, Subj: FAMF Staffing.

⁵⁵³Msg, AMCPT-SA, HQ, AMC to CG, AVSCOM, 1 May 72, Subj: Floating Aircraft Maintenance Facility (FAMF).

Meanwhile, in April 1972, the Navy proposed to take yet another nine enlisted spaces away from the FAMF military complement. The nine spaces were those used to operate the CCB's three small boats.⁵⁵⁴ The ARADMAC protested, citing both the CCB's "unique mission" and administrative delays inherent in transferring the nine spaces to another service.⁵⁵⁵ The AVSCOM seconded the ARADMAC's position,⁵⁵⁶ and, as a result, the Navy's proposal came to naught.

So too did, for a long time, the AVSCOM's attempt to regain the original nine lost spaces. Nevertheless, the Command continued to press for the spaces into the summer. Finally, in the fall of 1972, the Command received most of what it wanted. The first good news came on 6 October, when the AMC was able to allot 500 additional civilian spaces to the AVSCOM, ten of which were to be reserved for use with the FAMF's TDA Augmentation Element.⁵⁵⁷ The second welcome segment followed

⁵⁵⁴Msg, AMSAV-RM, HQ, AVSCOM, to CO, ARADMAC, 26 Apr 72, Subj: Transfer of US Army Billets (Spaces) to the US Navy.

⁵⁵⁵Msg, SAVAE-A, ARADMAC, to AMSAV-RM, HQ, AVSCOM, 2 May 72, same Subj.

⁵⁵⁶Msg, AMSAV-RMP, HQ, AVSCOM, to AMCPT-SA, HQ, AMC, 8 May 72, same Subj.

⁵⁵⁷Msg, AMCPT-SA, HQ, AVSCOM, to CDR, AVSCOM, 25 Oct 72, Subj: Floating Aircraft Maintenance Facility (FAMF) [sic].

on 27 November, when the AMC increased the FAMF's military strength from 201 to 206 by adding five enlisted spaces.⁵⁵⁸ Official AMC approval of these additions also came in two steps; it approved the Augmentation Element on 12 December 1972⁵⁵⁹ and the battalion strength on 31 December 1972.⁵⁶⁰

By the 31 December MTOE's standards, the battalion had 154 required and 64 authorized spaces in its Headquarters Company and 211 required and 142 authorized spaces in Company A.⁵⁶¹ Actual strength, however, would remain above authorized levels for some time. The reason was special AMC permission to use surplus personnel on an overstrength basis until they could be reduced by normal attrition.⁵⁶²

⁵⁵⁸Msg, SAVAE-G, ARADMAC, to AMSAV-G, HQ, AVSCOM, 29 Nov 72, Subj: Significant Action Report.

⁵⁵⁹Ltr, Mr. F. T. Elliot, Jr., Ch, For Dev Div, Dir of Pers, Trng & For Dev, HQ, AMC, to CDR, AVSCOM, 12 Dec 72, Subj: AMC Approval of Initial TDA for Augmentation Element, 1st Transportation Battalion (AMD) (SBN) M6WDCG9900, with 3 Incls, Incl 1, Augmentation Element, First Transportation Battalion (AMD) (SBN); Incl 2, DA Form 2028, Recommended Changes to Publications; and Incl 3, Table of Distribution and Allowances Number M6WDCG9900, Augmentation Element, First Transportation Battalion (AMD) (SBN).

⁵⁶⁰Ltr, Mr. Clyde V. Chapman, Ch, For Dev Div, HQ, AVSCOM, to AMXMM-TM, HQ, AMC, 15 Feb 73, Subj: FY 74 Submission of HHC 1st Trans Bn MTOE 55-466GM601 and Co A 1st Trans Bn MTOE 55-467GM601, with 2 Incls, MTOE 55-466GM601, Headquarters and Headquarters Company, Transportation Aircraft Depot Maintenance Battalion (Seaborne), and Incl 2, MTOE 55-467GM601, Transportation Aircraft Depot Maintenance Company, Transportation Aircraft Depot Maintenance Battalion (Seaborne).

⁵⁶¹Ibid.

⁵⁶²Msg, AMCPT-SA, HQ, AMC, to SAVAE-G, ARADMAC, 18 Dec 72, Subj: FAMF Surplus Military Personnel.

Workloading Details. Excepting, then, a subsequent, and largely administrative, seven percent strength addition, the basic FAMF structure for workloading was set very early in 1972. Accordingly, the DA was able, by March 1972, to set forth general guidelines about the work the CCB would do after its return home. These guidelines called for:

".... converting the FAMF from a depot level maintenance production line concept (little ARADMAC) to a facility which would be intermediate between the user and ARADMAC to do less difficult....jobs.... [that were] more in the DS/GS category....[This could mean] removal of shops and equipment....[to create space] to perform maintenance on end-item aircraft to include sheet metal repair, life extend and periodic inspections.⁵⁶³

DA thinking led, as we have seen,⁵⁶⁴ to the development of basic FAMF workloading plans by 8 May 1972. These plans were comprehensive, discussing not only the direct labor force, the shops to remain operational, and the labor training requirements, but also the strength of the work force and the load of reparablees that the CCB was to bring home for work until its FY 1973 workload program had been authorized. Plan specifics

⁵⁶³ Memo, Mr. Kenneth Sampson, Spec Projs Ofcr, Dir of Maint, HQ, AVSCOM, to Dir of Maint, HQ, AVSCOM, 31 Mar 72, Subj: Future Plans for the FAMF after its Arrival at Corpus Christi, Texas.

⁵⁶⁴ See p. 241.

included the use of about 150 direct laborers, to accomplish approximately 1500 annual work manhours each. These personnel were not, as in Vietnam, to be berthed on, or to receive support services aboard the CCB.

A 15-16 May 1972 workloading conference at the ARADMAC was set to refine the DA's plan,⁵⁶⁵ but, due to the CCB's unexpected return to Vietnam, it would be almost six months before it came to pass.

Finally, on 14 November 1972, the conference convened at the AVSCOM. In attendance were representatives from the DCSLOG, the AMC, the AVSCOM, the MIDA, the ARADMAC, and the Materiel Group. The next day, 15 November, the conference adjourned, having fixed responsibilities in four major areas.

One was workloading. The AVSCOM was to plan the FAMF workload and submit it to the MIDA by PRON. The MIDA would then authorize and fund the workload direct to the FAMF by individual PRON, replacing the present bulk PRON assignments.

Another was supply. The AVSCOM was to continue its repair parts logistical support to the FAMF. The AVSCOM, in conjunction with the ARADMAC and the FAMF, was also to develop procedures for the movement of serviceable and unserviceable depot

⁵⁶⁵Msg, AMSAV-F, HQ, AVSCOM, to AMCMA-EA, HQ, AMC, et al., 8 May 72, Subj: FAMF Workloading.

maintenance program assets by 1 January 1973.

The third was aeronautical engineering support.

The AVSCOM's Depot Engineering Support Division was to provide aeronautical engineering support to the FAMF as required. The AVSCOM was to establish the necessary procedures for this support by 15 January 1973.

Policy was the fourth. The AVSCOM was to publish a policy regulation for operation and control of the FAMF at Corpus Christi. This regulation was to be published by 1 February 1973.⁵⁶⁶

The results of this November conference spurred a 5-7 December 1972 supplemental meeting at Corpus Christi. The same commands sent representatives to this meeting for ostensibly the same purposes - to determine the workloading, reporting, ADP and supply procedures to be utilized by the CCB upon its return to Corpus Christi. Actually, however, the December meeting concerned specifics to be used in reporting and in funding. The decisions reached thus were largely minor and procedural, such as which forms the FAMF was to use to request ARADMAC support. The attendees did agree, though, to recommend that FAMF funding be conducted

⁵⁶⁶Dir for Maint, HQ, AVSCOM, Memorandum of Understanding, 15 Nov 72, Subj: Methods for Workloading Support of the Floating Aircraft Maintenance Facility (FAMF) in CONUS. Signed by LTC Rober H. Boehnke, DA, DCSLOG et al. With 1 Incl, List of Attendees.

on a non-Army Industrial Fund (AIF) basis.⁵⁶⁷ The FAMF workloading preliminaries thereupon concluded on 7 December 1972.

Disposition: 1972 - 1975

The FAMF at Corpus Christi, December 1972 - October 1973

Operation HOMECOMING

The workloading preliminaries ended none too soon. On 19 December, just 12 days after their conclusion, the CCB steamed into Corpus Christi Bay. Operation HOMECOMING had begun.

Operation HOMECOMING, alluded to earlier,⁵⁶⁸ was a detailed contingency plan which covered the entire spectrum of the FAMF's activities after the CCB's return. It had four main points: first, the redeployment of the battalion aboard the CCB; second, the transfer of the mission and functions of the Materiel Group to the ARADMAC; third, the inactivation of the Materiel Group and the Training Battalion; and fourth, the redesignation of a U. S. Army Depot Maintenance Company (Training) (Provisional) as a headquarters and headquarters type organization for ARADMAC use in overseeing the resulting FAMF organization. The ARADMAC allowed the FAMF organization up to 60 days to meet the four provisions.

⁵⁶⁷MFR, CPT Philip A. Mooney, Jr., Prog Mgr, FAMF, 7 Dec 72,
Subj: Workloading and Reporting of FAMF Production for CONUS Employment.
With 1 Incl, List of Attendees.

⁵⁶⁸See fn. 518.

The FAMF met all four ahead of schedule. The return of the CCB with the battalion aboard accomplished point one; point three came to pass on 1 January 1973 for the Training Battalion and on 15 January 1973 for the Materiel Group. Point two did not go exactly as planned; the mission and functions of the Materiel Group went to a newly - created Augmentation Element of the battalion, not to the ARADMAC.⁵⁶⁹ The last point, four, entailed a discontinuation of an original ARADMAC provisional training element⁵⁷⁰ and its re-organization and redirection along ARADMAC - desired lines.⁵⁷¹ The organizational orders spate abated with the assignment of the CCB battalion to the ARADMAC on 31 January 1973.⁵⁷²

Work

Intentions. Even while the organizational changes were proceeding smartly, the testing of the extensive workloading preparations had begun:

The first phase was not too difficult. Though a workload had been awaiting the CCB since 15 December,⁵⁷³ the AVSCOM had anticipated a short

⁵⁶⁹ MCA GO No. 288, 15 Dec 72.

⁵⁷⁰ AVSCOM GO No. 21, 9 Feb 73.

⁵⁷¹ (1) ARADMAC GO No. 7, 12 Feb 73. (2) ARADMAC GO No. 22, 23 May 73.

⁵⁷² AVSCOM GO No. 19, 31 Jan 73.

⁵⁷³ Msg, AMSAV-FMO, HQ, AVSCOM, to AMCMA-DO, HQ, AMC et al., 28 Nov 72, Subj: FAMF Workloading.

initial period of inactivity. This period would be taken by such matters as ceremonies, personnel turbulence, re-establishment of the on-board battalion, and other administrative matters.

By 26 December, however, this interlude had passed. The CCB's on-board battalion had been reorganized to reflect its 206-man authorization,⁵⁷⁴ the Augmentation Element had been organized,⁵⁷⁵ and the CCB had been moved to Dock 12 to be prepared for production. The CCB was now ready to perform depot maintenance and training while awaiting a possible 60-day contingency call.

Pending deployment, the FAMF had a five-month workload facing it for the balance of FY 1973. This five-month allotment, set to begin 1 February 1973, was to allow about a month-and-a-half to adjust to HOMECOMING. The scope of the workload allotment covered 44 lines of first-line aircraft systems, requiring 55,895 work man-hours and \$704,120 in costs. Ninety-two laborers were to perform this work in eight primary shops - engine, fuel control, power train, rotor head, tail rotor, electric, instrumentation, and hydraulic. These workers would also man secondary support shops, such as the sheet metal and fabrication section, which were to be workloaded from the primary shops on an as necessary basis. The AVSCOM calculated an initial figure of 1,500 man-hours per year per worker in output.

⁵⁷⁴AMC GO No. 295, 20 Dec 72.

⁵⁷⁵(1) AMC GO No. 288, 15 Dec 72. (2) Msg, SAVAE-A, ARADMAC, to AMCPT-SA, HQ, AMC, 5 Dec 72, Subj: Floating Acft Maintenance Facility (FAMF). (3) Msg, AMCPT-SA, HQ, AMC, to CDR, HQ, AVSCOM, 27 Nov 72, Subj: Floating Aircraft Maintenance Facility (FAMF). (4) AOC Spot Report, Mr. Kenneth Sampson, Ch, Obser Acft Br, HQ, AVSCOM, to Dir for Maint, HQ, AVSCOM, 8 Dec 72, Subj: FAMF.

The AVSCOM also provided a FY 1974 program for the CCB. Basically an extension of the FY 1973 program, the FY 1974 program had the same number of lines - 44 - and about the same rate of output, which for twelve months entailed 148,000 man-hours at a cost of \$1,974,000.⁵⁷⁶

Reality. The AVSCOM's work expectations fell short on two counts:

The first was in the strength of the productive workforce. In May 1972, as had been noted,⁵⁷⁷ the AVSCOM had laid plans for a 150-man workforce that would work 225,000 annual man-hours. In short order these figures were cut to 122 men and 183,000 hours,⁵⁷⁸ and then again to the 92-man total.

The second overestimation was in workload variety. By January 1973, the AVSCOM had been forced to cancel ten projected FAMF lines because these fund lines already had been exhausted for FY 1973. Only 13 lines were, indeed, at the ARADMAC as of January, forcing the AVSCOM to plan substitute lines in order to be able to utilize fully the projected 56,000 man-hours of work aboard the CCB. Of particular moment among the substitution obstacles that AVSCOM faced was a lack of reparable engine assets.

The second problem was serious neither in the short nor in the long term. For the present, for example, the FAMF had both reparable assets

⁵⁷⁶ Fact Sheet, Mr. Kenneth Sampson, AMSAV-FMO, HQ, AVSCOM, 26 Dec 72, Subj: Floating Aircraft Maintenance Facility.

⁵⁷⁷ See p. 283.

⁵⁷⁸ [Fact Sheet], [Dir of Maint, HQ, AVSCOM], c. 9 May 72, Subj: FAMF.

brought from Vietnam - Operation SEAFIX - and a readily available workload at the ARADMAC. In the long haul, moreover, the AVSCOM could easily shunt repair work to the FAMF.⁵⁷⁹

The strength of the productive workforce was another matter. It would seem easy, especially in view of the civilian augmentation element, to have shifted 58 of the 206 CCB spaces back into production. Such a shift, however, would raise the productive to administrative force ratio from 1:1.2 to 2.9 to 1, which would have given the CCB probably the best teeth-to-tail ratio of any logistical organization in modern Army history. In short, the almost even ratio achieved represented not only an impressive number of producers, but also one similar to that used in Vietnam by the FAMF itself: 1.1 : 1.⁵⁸⁰ Any more would have been an anomaly.

Because of administrative problems, productive ratios would remain a moot question for some time. The 1st TC Bn, indeed, did not begin operations until March 1973, one month behind its scheduled 1 February 1973 start.⁵⁸¹ Even then, production began on a very small scale, and it rose slowly.

⁵⁷⁹Talking Paper, Mr. Dean Tracy, Ch, Maint Mgt Div, Dir of Maint, HQ, AVSCOM, to Dir of Maint, HQ, AVSCOM, 5 Jan 73, Subj: Updated Status of the FAMF.

⁵⁸⁰This ratio is based on 191 productive workers in 365-man battalion. Lower than the 214 listed on the tables, which would have produced a 1.4: 1 ratio, the 1.1: ratio was an APJ finding: Ltr, Dr. George Chernowitz, Dir, APJ, to COL John F. Sullivan, AMCPM-FL, HQ, AMC, 10 Feb 66, Subj: [Contract No. DA23-204-AMC-03933(T)].

⁵⁸¹Staff Historian, Annual Supplement to Unit History, ARADMAC FY 73, p. 9.

HULA - HOOP

Alert and Response. This situation would last scarcely more than two months. On 18 May 1973, the CCB received a DA alert notification requiring it to support the Defense Nuclear Agency's Operation HULA-HOOP. The purpose of HULA-HOOP was to monitor French nuclear testing in the Pacific.

Everyone at the AVSCOM was not entirely pleased by the news. Noting that the FAMF was just beginning to produce at its home station, the Director of Maintenance feared that HULA-HOOP would have three adverse effects:

first, it would require shifts of the FAMF workload to other locations that were already hard-pressed by recent manpower reductions,

second, it would probably entail removal of certain equipment from the CCB, some items of which could be used only on shipboard,

and, third, it would require removal of "positioned" repairable assets and repair parts that would have to be shipped to appropriate replacement facilities.⁵⁸²

Despite this internal demurrer, however, the Command posed no objection to the CCB's use in HULA-HOOP. It only asked the AMC to let it use the personnel not used in HULA-HOOP at the ARADMAC.⁵⁸³ The AMC offered no objection.

⁵⁸²Fact Sheet, COL William G. Phillips, Dir of Maint, HQ, AVSCOM, to Cdr, AVSCOM, 9 May 73, Subj: Floating Aircraft Maintenance Facility (FAMF).

⁵⁸³Msg, AMSAV-FMR, HQ, AVSCOM, to AMCMA-EA, HQ, AMC, et al., 23 May 73, Subj: Use of USNS Corpus Christi Bay (FAMF) as Special Project Ship (Hula Hoop).

Preparations. Three major steps had to be taken before the CCB could depart for the Pacific. First, the FAMF had to stop production, begin unloading unnecessary equipment, and make sea security plans. Second, it had to arrange for the CCB to be towed to New Orleans for the installation of special monitoring devices for HULA-HOOP. Third, and last, it had to form a support element to send on HULA-HOOP. The first two steps passed rapidly; by 28 May 1973, step one was done and the CCB was able to depart for New Orleans under tow.⁵⁸⁴ The third step dragged on to 15 June, by which time the ARADMAC had formed a 47-man detachment under the battalion commander.⁵⁸⁵ The AVSCOM approved this support group formation on 21 June 1973.⁵⁸⁶

The CCB's New Orleans destination was Boland Marine Manufacturing, Incorporated.⁵⁸⁷ On 1 June 1973, the CCB reached Boland, where extensive refitting and some maintenance took place. Boland had been retained on a sole source basis in order to expedite CCB's availability to 25 June 1973. Boland almost made it; the CCB was able to depart New Orleans on 28 June.

⁵⁸⁴1st TC Bn (SBN), ARADMAC, Operation HULA-HOOP, c. 13 Oct 73, p. [1].

⁵⁸⁵Msg, SAVAE-G, ARADMAC, to AMSAV-FMR, HQ, AVSCOM, 15 Jun 73, Subj: Request for Authorization.

⁵⁸⁶Msg, AMSAV-RM, HQ, AVSCOM, to CDR, ARADMAC, 21 Jun 73, Subj: Establishment of Provisional Element.

⁵⁸⁷HQ, 1st Med Grp, Fort Sam Houston, TX, LO 158, 13 Jun 73.

Operations. Embarked on the CCB was the battalion support element, the MSC crew, and representatives of the DNA and the Navy. These personnel underwent a 51-day voyage, stopping only at Rodman Naval Base, the Canal Zone, 4-6 July. On 17 July the CCB reached the operations area and immediately took on fuel.

There the CCB supported the observation of, and the gathering of data on, French nuclear tests. This support required the services of three platoons. The first platoon, "A", manned seven shops--machine, welding, carpenter, parachute, hydraulic, electrical, and instrument -- providing 975 direct support manhours for such tasks as parts fabrication for on-board Naval helicopters. The second platoon, "B", operated an Air Traffic Control Tower - 306 manhours, manned the Flight Deck - 575 manhours, worked the ship's Crane - 90 manhours, and ran an ADP section and a chemical and a photographic laboratory. The third platoon was a medical element which provided health services to all on-board the CCB, treating 529 medical and 275 dental patients during the voyage. The Army element also operated a barber shop, a motion picture projector, and a copying machine.

During the nuclear tests, the CCB left its station only twice. The first departure was to Pago-Pago, American Samoa, for refueling, 31 July to 17 August; the second to Papeete, Tahiti, for hull repairs,⁵⁸⁸ 31 August to 13 September. On 15 September, the CCB sailed for home, stopping at San Diego 26 to 29 September and in the Canal Zone,

⁵⁸⁸The CCB's void tanks also suffered damage, probably from internal deterioration. These were not repaired. See Table 10, Col. 1, p. 303.

7 to 8 October. On 13 October the CCB arrived at Corpus Christi, ending a 108-day voyage.⁵⁸⁹

The FAMF at Corpus Christi, 13 October 1973-31 March 1975

Production, 1973-1974

With the CCB back, production slowly resumed. It never, however, rose to anything more than a small fraction of its former output, and its dollar value of items returned actually declined in 1974, as this table shows:

Table 4, Comparison of FAMF Productivity, CY's 1966-1974

<u>Year</u>	<u>Services Items Returned</u>	<u>Dollar Value Of Items Returned*</u>
1966**	9,378	\$ 9.9
1967	38,220	25.7
1968	39,060	38.9
1969	47,880	40.6
1970	85,884	50.9
1971	55,056	41.0
1972	16,555	14.0
1973	1,297	1.99
1974***	3,524	1.76
Totals	296,854	\$233.75

* Expressed in millions.

**Production began 2 April.

***Production ceased 15 October.⁵⁹⁰

⁵⁸⁹(1) 1st TC Bn (SBN), HULA-HOOP, op cit., pp. [2-3]. (2) Staff Hist., ARADMAC, FY 73, op. cit., p. 15. In the interests of freer dissemination and use of this monograph, several classified HULA-HOOP documents, which are available in files at the AVSCOM, were not used. These documents give a more complete accounting of the HULA-HOOP operation.

⁵⁹⁰Staff Hist, ARADMAC, FY 73, op. cit., p. 13.

There were at least three mitigating circumstances to account for this decline in productivity. First, the CCB lost about five months production in 1973, four for HULA-HOOP and one for the administrative transition, and two-and-one-half more in late 1974, when the CCB was being prepared for return to the MSC. Second, the CCB had a smaller workforce in Corpus Christi than it had in Vietnam - 92 production workers versus 214. Third, and finally, the CCB lost its replacement pool with the dis-establishment of the training battalion, a step which forced the FAMF more into the business of scouring for skilled replacements.

Substantial as these circumstances were, however, they could in no way account for the extent of the production decline. The 1974 dollar value output, for example, was eight times less than even 1972's, a year in which the FAMF was on-station in Vietnam less than nine months. It was, moreover, approximately 29 times less than that of 1970, the peak FAMF production year. The differences were even greater when inflation was taken into account.

There were two probable causes for this drop. One was the type of repairs that the FAMF was getting; the other was the lack of money for supplies to effect the repairs. The former showed itself in the preceding table; the number of items repaired almost tripled from 1973 to 1974, but their dollar value fell. In short, the FAMF switched to a high-volume of low-priced items. The latter cause, the lack of money, reveals itself in the \$63,000 allotted for supplies for both 1973 and 1974.

These funding cuts, coupled with a lack of major repair items and a stringent personnel situation, seemed together to have a snowball effect. This effect, perhaps, was the explanation for the FAMF's inability to become a major producer at Corpus Christi.⁵⁹¹

Costs - Summation

Whatever the explanation, production never was, nor was it intended to be, the main reason for stationing the CCB at Corpus Christi instead of scrapping her. The real purpose, as noted countless times before, was to have a mobile depot ready to deploy on 60-days notice. Nevertheless, costs and productivity continued to be emphasized, for no one seemed to be able to justify the FAMF on the basis of an intangible, mobility.

FAMF O&M,A costs dropped greatly in the 1973-1975 years; most of the organization was gone. The following table shows the fall:

TABLE 5, FAMF Organization O&M,A Costs, FY's 1966-1975

Activity or Function	Fiscal Years									
	66	67	68	69	70	71	72	73	74	75
Mat Gp No. 1										
and Trng Bn	\$ 202*	117	125	226	398	581	568	**	**	**
Training	72	97	97	69	91	79	69	27	25	16
Equipment	0	0	79	125	97	61	16	50	13	1
FLAT-TOP Fld Ofc	290	270	185	222	146	***	***	***	***	***
Lst Tc Bn	2,141	3,130	2,897	4,781	3,440	4,079	498#	371#	486#	****
MSTS/MSC	1,591	2,623	3,380	3,746	3,925	4,620	4,306	2,838	288	209
PMO	0	0	90	78	26	0	0	0	0	0
Totals	\$4,296	6,237	6,853	9,247	8,133	9,420	5,457	3,286	812	236

⁵⁹¹Ibid., p. 11.

* Costs expressed in thousands.

** Inactivated.

*** PMO terminated.

Cost reductions due to return of excess supplies.

**** Information not provided.⁵⁹²

The dramatic slash in MSTS/MSC costs in the table above grew out of 24 October 1972 Army-Navy FAMF Memorandum of Agreement. According to the terms of that agreement, the MSC agreed to provide a minimum crew. After some haggling over who would man what,⁵⁹³ the two services concurred in an eleven-man MSC crew.⁵⁹⁴

Cost - Effectiveness Studies, 1973-1975

The First Two Studies. As the above section and previous discussions suggest, the FAMF was never able to escape the seemingly unresolvable problem of justifying its cost. The return from Vietnam, indeed, seemed only to fire the issue because of those cost reductions associated with the overall withdrawal. Therefore, it is not surprising that the CCB was barely in her berth before cost-effectiveness studies resumed.

⁵⁹²Ibid.

⁵⁹³(1) Msg, COMSC, Wash, D.C., to DA, DCSLOG, HQ, DA, 28 Feb 73, Subj: USNS Corpus Christi Bay Manning Problems. (2) Msg, COMSC, Wash, D.C., to CDR, ARADMAC, 1 Mar 73, same Subj. (3) Msg, SAVAE-G, ARADMAC, to CDR, MSC, Wash., D.C., 8 Mar 73, same Subj. (4) Msg, COMSC, Wash., D.C., to CDR, ARADMAC, 20 Mar 73, same Subj. (5) Msg, SAVAE-GG-CO, ARADMAC, to AMSAV-F, HQ, AVSCOM, 23 Mar 73, same Subj. (6) Msg, AMSAV-FMR, HQ, AVSCOM to CDR, AMC, HQ, AMC, 30 Mar 73, same Subj. (7) Msg, AMCMA-EA, HQ, AMC, to DALO-SMA, HQ, DA, 4 Apr 73, same Subj.

⁵⁹⁴(1) Msg, DALO-SMA, HQ, DA, to MSC Wash, D.C., 5 Apr 73, same Subj. (2) Msg, COMSC, Wash, D.C., to RUEADWD/DA, HQ, DA, 6 Apr 73, Subj: USNS Corpus Christi Manning.

On 9 April 1973, the AMC itself instigated a new round of what was to be four studies. On that day, the AMC directed "...that the operational effectiveness, productivity and usefulness of FAMF be evaluated, while moored at Corpus Christi." As the AMC expected a completed reply not later than 16 July 1973, the evaluation had to be conducted with the aid of a questionnaire and with the cooperation of personnel involved in a current FAMF AAA audit.⁵⁹⁵

The prime result of the combined AMC-AAA survey was a conclusion that the FAMF needed specific contingency plans. This conclusion prompted the second study, a November 1973 contingency capability effort. The November work did indeed provide specifics, ranging from important items such as aircraft transport capabilities to minutiae - for example, the exact physical dimensions of every tank in the Plating Shop.⁵⁹⁶

The Third Study. While the November 1973 study was being completed, the AMC, on 17 October 1973, directed a more thorough effort. The new task was to include not only a contingency capability study, but also an economic analysis and an analysis of land-based alternatives for the FAMF. On 17 November 1973, the AMC amended the study, changing the economic analysis to a cost analysis.⁵⁹⁷

⁵⁹⁵Msg, AMCMA-EA, HQ, AMC, to SAVAE-GD, ARADMAC, 12 Apr 73, Subj: FAMF Evaluation.

⁵⁹⁶1st Tc Bn (AMD) (SBN), FAMF Contingency Capability Study. [ARADMAC], Nov 73, pp. 45-[89], Appendix U to Annex H.

⁵⁹⁷Ltr, COL Robert J. Dillard, Cdr, ARADMAC, to CDR, AVSCOM, 3 Dec 73, Subj: Floating Army Maintenance Facility.

The contingency capability study was the first part of the package to appear. Though virtually a copy of its November predecessor, the December study did emphasize contingency operations, including a lengthy deployment scenario. This scenario was based upon what might have happened had the FAMF been available in its present 60-day readiness status in 1961. The scenario followed the FAMF from that year through a three-phased involvement lasting into 1972, primarily trying to show that an on-hand FAMF would have been far better than the early "... logistical support of aviation parts [which] consisted mainly of push packages and moonlight requisitions."⁵⁹⁸

The remaining two parts of the third study package were incorporated into a January 1974 publication entitled Cost Analysis. This volume consisted of two major parts: Part One, called Peacetime Alternatives Costs, and Part Two, Mobilization Costs. Both parts marshalled massive evidence to support retention of the CCB.

Part One, the largest part, offered a thorough analysis of four peacetime alternatives for use or for disposition of the FAMF. Relying on the assumption that the CCB would be operated at Corpus Christi by its current 206-man complement, this analysis took FY 1974 as the first year, and then it projected a ten-year period into the future. It showed so-called "one-time" or initial investment costs for the first year; it gave annual recurring costs for the next ten years.

⁵⁹⁸1st Tc Bn (AMD) (SBN), FAMF Contingency Capability Study, [ARADMAC], 7 Dec 73, pp. 50-57.

The four alternatives were:

first, restore the CCB to a ready reserve status (RRS) of 60 days and retain the 1st TC Bn at a strength of 206 military and ten civilians;

second, return the CCB to the Navy, deactivate the battalion, and give the FAMF workload to the ARADMAC;

third, "mothball" the CCB in the National Defense Reserve Fleet (NDRF), but retain the battalion;

and, fourth, "mothball" the CCB in the NDRF, deactivate the battalion, and give the FAMF workload to the ARADMAC.

The resulting cost figures were quite surprising. In constant FY 1974 dollars, the eleven-year costs of Alternatives 2, 3 and 4 were almost identical - \$27.922 million, \$27.879 million, and \$27.969 million, respectively. Alternative one, amazingly, was only about \$10 million higher than any of the other three - \$38.243 million.

There were two cost categories that accounted for these proximities in cost. The most important was the so-called recurring costs area, which had close end totals:

Table 6, Recurring Costs, Alternatives I-IV, January 1974
Cost Analysis

Types of Costs	Alternative Amounts			
	I	II	III	IV
Military Labor, 206 Personnel	\$2,032,086	\$ 0	\$2,032,086	\$ 0
Civilian Labor, 10 Personnel	122,472	0	0	0
Civilian Labor, 182,269 Man-hours	0	2,442,405*	0	2,422,405*
Civilian Labor, 6 Personnel	0	0	73,183	0
Base Operations Support	399,000	0	328,000	0
MSC Costs	555,000	0	0	0
ARADMAC Support Services	48,000	0	0	0
Rental and Maintenance of ADP Equipment	39,000	0	0	0
Replacement of Army Capital Equipment	35,000	0	0	0
Annual Cost of Drydock and Maintenance	125,000**	0	0	0
Totals	\$3,355,558	\$2,442,405	\$2,433,269	\$2,442,405

* This cost assumed a man-hour cost of \$13.40 per hour, which seems rather high in view of the approximate \$5 per hour wage rate then prevailing at the ARADMAC.

**Drydocking was to occur once every two years at a cost of \$250,000.

As the above table shows, the recurring cost difference each year was only about \$900,000, or \$9,000,000 after ten years. The other \$1,000,000 of the approximate \$10,000,000 difference came in FY 1974, when the AMC had to estimate damages incurred during HULA-HOOP. Thus, for only one million dollars a year, one could have a FAMF on 60-day call, a conclusion clearly favoring Alternative I.

This conclusion is even stronger in Part Two, Mobilization Costs. Part two compares the costs of three mobilization support alternatives: the FAMF; a CONUS pipeline; and a land-based facility equivalent to the FAMF, either newly-built or pre-positioned. The figures again point to a cheap FAMF :

Table 7, Comparison of Mobilization Alternatives, Cost Analysis

<u>Types of Cost</u>	FAMF	Alternatives		CONUS	Land Bases	
	<u>1</u>	<u>3*</u>	<u>4</u>	<u>Supported</u>	<u>New</u>	<u>Positioned</u>
Non-Recurring	\$ 3.164**	\$ 5.733	\$ 6.092	\$12.586	\$25.532***	\$56.584****
Annual Recurring	\$19.445	\$19.445	\$19.445	\$16.627	\$19.520	

* Alternative 2 not shown because it entails complete termination of the FAMF organization.

** Costs shown in millions.

*** Presumes no site acquisition costs, as in Vietnam.

**** Includes the costs of three world-wide sites: in Greece, \$14,418,064; in West Germany, \$14,887,738; and in Southeast Asia, \$20,993,502.

Two conclusions may be drawn from this table. The first, and most obvious, is that it continues to support the proposition that the FAMF is less expensive in any case, except that of a long-term CONUS-supported operation. The second conclusion may be drawn from the following figures:

Comparison of Annual* Manhour Costs

ARADMAC Annual Costs	\$7,396,800**
FAMF Annual Costs	<u>\$3,955,110***</u>
Difference	\$3,441,690

* FAMF productive manhours were reckoned to be 46,000 per month;

46,000 x 12 = 552,000.

** Determined at the same \$13.40 per hour used in Table 6.

*** Does not include \$804,953, which the AVSCOM deemed necessary for overhead and ARADMAC support.

The difference shown in the above comparison clearly indicates a dogged belief in the fantasy that military labor is far cheaper than civilian labor. Several other analysts, however, would disagree. Some indeed, would suggest that the opposite were true.

Avoiding both extremes would seem best. Even if the labor costs were only equal, though, there would be a significant dollar imbalance against the FAMF, thus altering the "proofs" set forth in the tables. It would also, sadly but assuredly, lead to skepticism about the accuracy of any of the figures in the tables.

At least one point should be made to support this last suggestion. Towards this end, a glance at the FAMF Recurring Mobilization Costs reveal \$5,440,000 listed as MSC costs.⁵⁹⁹ Actual FAMF MSC expenditures themselves disagree with this figure. Instead, they point towards an upward MSC cost trend, a trend outlined in the following figures:

⁵⁹⁹1st Tc Bn, FAMF Cost Analysis, ARADMAC, Jan 74, pp. 8, 11-27.

<u>Fiscal Years</u>	<u>MSC Costs</u>
1966	\$1,591,000
1967	2,623,000
1968	3,380,000
1969	3,746,000
1970	3,925,000
1971	4,620,000
1972	5,353,000*

* Actually, \$5,353,000 had been programmed for FY 1972, but the drawdown reduced this projection to an actual outlay of \$4,306,000.⁶⁰⁰

If \$5,353,000 had been projected in MSC expenditures for FY 1972, and the lowest yearly jump in MSC expenses was \$179,000 between FY 1969 and FY 1970 - then \$5,440,000 might be considered as a conservatively low estimate for FY 1974. Taking an average cost jump of \$563,000 per year between 1966 and 1972, an appropriate FY 1974 estimate would be \$6,479,000 (\$563,000 x 2 + 1972 estimate) - \$1,039,000 higher than the table's amount.

The Final Study. The fourth and final FAMF study of this period appeared 31 March 1975, the FAMF organization's last day. Drawn in the form of an annual summary, the keys to this study were its six appendices - A, Chronology, 22 Oct 62 - 31 Mar 75; B, Training Reqmts (Replacement Personnel); C, Yard Periods; D, Funding Charts; E, Cost/Performance Analysis Study; and F, Contingency Capability. A very brief annual summary, cast ahead to 31 March 1975, preceded the appendices.

The whole study was little more than an updated version of its

⁶⁰⁰ 1st Tc Bn, Historical Summary, 31 March 75, Annex D, Funding Charts, pp. 22, 25, 50, 57, 59.

1973 predecessor. The summary portions and all of the annexes save E certainly fit this description. As for E, it was, though advertised as edited, nothing but a new printing of the AVSCOM's 16 March 1970 study, discussed in the previous chapter. The only difference in the 1970 and 1975 printings was that the latter eliminated six pages of parts serial numbers and a footnote about the location of an inclosure.⁶⁰¹

The Studies in Retrospect. The form and substance of the four FAMF studies conducted in the 1973 to 1975 years constitute quite reliable indicators of the progressively failing health of the FAMF organization. At first, with the FAMF actively functioning as a key element in world-wide Army strategic contingency planning, the studies aimed at how cheaply the FAMF was doing its job, and then at what jobs it could do. The last study, though, was nothing but a hastily pieced-together apologia of the FAMF that was. Little more could have been done at the end; a skeletal organization, divorced from ready access to AVSCOM support, had fallen victim to post-Vietnam austerity.

Dissolution

None of the studies, then were able to do more than plot the FAMF's last course. Their main mission, to convince the DA that the FAMF was a justifiable organization, fell to the wayside in the face of two overwhelming obstacles. The foremost was the expense involved in operating,

⁶⁰¹ 1st Mat Gp, Historical Summary, 15 Jan 73, op. cit., Annex E, pp. [60-65] [96].

maintaining and manning a 35-year old ship; the other was DA recognition of the growing possibilities of air transporting temporary repair facilities. The DA thus seemed to move inexorably towards a conclusion that the FAMF offered an additive capability that could be dispensed with in an increasingly stringent financial background.

It was in the context of this hardening DA position that the second and third studies, the Contingency Capability Study and the Cost Analysis, were completed. On 3 April 1974, the AMC forwarded these studies to the DA, together with its endorsement of their chief recommendation, namely, that the FAMF be restored to a 60-day ready reserve status within the Army inventory. The DA thereupon began an intensive, coordinated two-month analysis of the studies.

On 17 June 1974, the DA informed the AMC of the results of its analysis. Beginning with an acknowledgement "...that the FAMF was extremely effective in Vietnam," the DA proceeded to attack every reason that the AMC had given for retaining the FAMF as it was. Noting that there were alternatives to the FAMF, the DA concluded it could "...no longer support the FAMF as currently constituted."

What, then? The DA continued:

4. Consideration has been given to the four alternatives posed by AMC in the FAMF analysis. We believe that a modification of Peacetime Alternative 3 is the best solution, i.e., return CCB to the Navy but retain the 1st Transportation Battalion in some form. The one-time cost to restore the CCB to a deployable status would be about \$1.5 million. This cost, the age of

the CCB and the fact that it would take one year to return the FAMF to a fully operational status from storage rule out the feasibility of mothballing the CCB for retention and further use. Accordingly, it is requested that you take appropriate action to remove Army equipment and return the USNS Corpus Christi Bay to the Navy by 31 December 1974.

The CCB thus disposed of, the DA turned to the ship-less battalion. In order to keep these men, the DA cautioned, the AMC would have to find a mission for them. The DA obligingly offered three alternative means of doing this:

a. [Establish]....in transportable shelters or vans those shops from the FAMF which can be made mobile and provide quick-reaction response overseas by air or sea transport.

b. Retain a cadre of depot-level trained and experienced military personnel with airframe and component related skills for utilization world-wide in peace and war. These personnel will be used individually or in teams for OCM inspections; technical assistance to depot level modification programs (ZYA); mobile teams for preservation and escort of Army aircraft being transported without unit escort; mobile technical assistance teams, etc.

c. [Retain] up to 206 authorized spaces in any other depot-level logistic role that may be required

for support of other equipment and commodities.

No matter what the AMC did, the battalion would no longer have its 365 authorized spaces. Instead, the present 206 spaces would have to suffice. Indeed, in "view of the overall DA objective to reduce logistic personnel spaces in order to increase combat personnel spaces it will be necessary to make a strong case for retention of any of the 206 spaces."⁶⁰²

The DA's June letter signalled the end of the FAMF project. At this point, the FAMF had only two assets left: the ship and the battalion. The DA letter took away the former outright and gave the AMC until 5 August 1974 to make a case for saving about 56 percent of the latter in some non-FAMF capacity.⁶⁰³

The AMC's 17 September 1974 reply did not attempt to make such a case. Instead, the AMC decided that, "without the CCB as a floating depot maintenance facility, the 1st Tc Bn is ineffective." Accordingly, it notified the DA that, in addition to returning the CCB to the Navy by 31 December 1974, it would "also take action to inactivate the 1st TC BN" during the third quarter of FY 1975. The AMC estimated that it would cost about \$271,000 to remove Army equipment from the CCB and to return the ship to the MSC.

Despite its apparent acceptance of the FAMF's DA-ordained fate, the

⁶⁰²The Army's drive to increase its combat strength despite its post-Vietnam loss in numbers was known as Project 16-76. That is, the current 13 combat divisions were to be increased to 16 by 1976.

⁶⁰³Ltr, LTG Fred Kornet, Jr., DCSLOG, DA, to AMCMA-EA, HQ, AMC, 17 Jun 74, Subj: Floating Army Maintenance Facility (FAMF), USNS Corpus Christi Bay (CCB).

AMC, even this late, did not cease grasping at any means of keeping the ship, if not for itself, at least for the Army. Hence, the AMC noted that during its

...evaluation of alternatives, FORSCOM indicated an interest in the floating maintenance facility concept as a potential in [sic] their contingency planning to the extent of possibly placing a General Support Aircraft Maintenance Company aboard the ship. Therefore, we recommend that FORSCOM be queried as to the employability of the CCB for their use as a mobile heavy maintenance facility for contingency and training.⁶⁰⁴

The AMC apparently believed that nothing would come of the FORSCOM query, for LTC Roger H. Boehnke, the 1st Tc Battalion Commander, had tried frantically for months to get any one of several major Army commands to take the CCB. The colonel always got the same response. Everyone broached was favorable, even eager, but none wanted to spend \$8 million per year to operate the ship.⁶⁰⁵

Acting accordingly, the AMC, on 27 September 1974, notified the

⁶⁰⁴Ltr, MG Joseph W. Pezdirtz, DCG for Log Spt, HQ, AMC, to HQ, DA (DALO-ZA), 17 Sep 74, same subject.

⁶⁰⁵Interview, H. Butler with LTC W. Crowell, inter. cited.

Commander, Corpus Christi Army Depot (CCAD),⁶⁰⁶ to prepare a schedule for returning the CCB to the Navy by 31 December 1974. To insure its success in this schedule, the CCAD was to host a conference about 15 October 1974 to discuss the following items: milestones review; equipment removal requirements; related costs; and related actions, such as a ship transfer ceremony. Attendees were to include, at a minimum, representatives of the AVSCOM, the MIDA, the MSC and the AMC.⁶⁰⁷ On 4 October 1974, the CCAD replied, designating 16-17 October 1974 as the conference dates.⁶⁰⁸

Although the AMC's 27 September letter to the CCAD did not mention it, the conference would also address one other topic: inactivation of the CCB's battalion by 31 March 1975. On 3 October 1974, the DA provided the formal basis for this discussion, inactivating the FAMF and the 1st Tc Battalion, effective 3rd Qtr FY 1974. All 206 military and the ten civilian spaces were lost.⁶⁰⁹

On 16 October, the conference convened as directed. Conferees included representatives of the CCAD, the AMC, the MSC, the MIDA, the TROSCOM, the

⁶⁰⁶The ARADMAC's new designation, effective 28 June 1974. The CCAD reported directly to the AMC, by-passing the old AVSCOM intermediate relationship.

⁶⁰⁷Ltr, Mr. H. J. Bukowski, Actg Dir of Maint, HQ, AMC, to Cdr, CCAD, 27 Sep 74, Subj: Floating Army Maintenance Facility (FAMF), USNS Corpus Christi Bay (CCB).

⁶⁰⁸Msg, AMXAD-G, CCAD, to AMCMA-EA, HQ, AMC, 4 Oct 74, same subject.

⁶⁰⁹Ltr, BG Alfred B. Hale, Dir of Force Progs and Struct, ODCSOPS, HQDA, to Cdr, AMC, 3 Oct 74, Subj: Inactivation of the Floating Army Maintenance Facility (FAMF) and the 1st Trans Corp Battalion.

ARMCOM,⁶¹⁰ the Lexington-Bluegrass Army Depot (LBAD), and the Battalion. The conferences were to discuss, in addition to the two sets of inactivation milestones, such agenda items as J-Boat and LARC 15 Disposition and workload transfer plans.⁶¹¹

The CCB got most of the attention. The reason for this was the hitherto undeveloped awareness among the conferees of the problems of stripping the ship and disposing of the equipment. The CCAD wanted some of the equipment, but, by AMC direction, the equipment had

...to be retained in set/kit configuration for establishment of a "mobile depot" concept using shelters of other containerization. The sets would be stored at Red River Army Depot because of lack of space at CCAD.

The conferees, however, did decide to request AMC exceptions to some use of the equipment.

Battalion inactivation, the other subject, presented only one issue - early inactivation. The battalion requested a later, 4 Qtr, phase-out in order to permit its members to attend to such personal matters as the close of school terms for their dependent children. The AMC attendees supported this request, but they did suggest that a

⁶¹⁰The WECOM was redesignated the Armaments Command (ARMCOM) on 1 July 1974.

⁶¹¹Msg, AMXAD-G, CCAD, to AMCMA-EQ, HQ, AMC, et alia, 4 Oct 74, Subj: Floating Aircraft Maintenance Facility (FAMF), USNS Corpus Christi Bay (CCB).

postponement might not be acceptable.⁶¹²

The AMC attendee's reservations about the stretched-out battalion inactivation proved correct. On 30 October 1974, the AMC issued its own schedule, inactivating the battalion and discontinuing the augmentation element on 30 March 1974.⁶¹³ Two days later, on 1 November 1974, the AMC supplemented its directive with orders, to be effective 31 March 1975.⁶¹⁴

Inactivation of the CCB proceeded as scheduled. By 6 December 1974, workers had completed removal of the CCB's supplies, tools and equipment and had placed these in storage at Rodd Field, CCAD. Three days later, 9 December, the USNS John U. Page arrived at Corpus Christi to load the CCB's two LARC XVs and its J-Boat. Finally, on 31 December 1974, the battalion turned over the CCB to the MSC in a brief on-board ceremony which began at 0800 hours. On 8 January 1975, the CCB departed under tow to Orange, Texas, for further stripping, after which it went to Beaumont, Texas, for later disposition.⁶¹⁵

The battalion inactivation required only two major actions:

The first was disposal of battalion property. This action entailed the conduct of an audit of the MTOE and Special Tool Property Book Pages.

⁶¹²Memo, Mr. Peter Gritis, Miss & Org Div, Plans & Anal Dir, HQ, AMC, for Dir, Plans & Anal, HQ, AMC, 21 Oct 74, same Subj. With 2 Incls, Incl 1, FAMF Turn-In Conference - 16 October 1974, and Incl 2, USNS CCB & 1st Trans Bn Phasedown Milestones, 17 Oct 74.

⁶¹³Msg, AMCMA-EA, HQ, AMC, to Cdr, CCAD, et al., 30 Oct 74, Subj: Phasedown of USNS Corpus Christi Bay (CCB) and 1st Transportation Battalion (AMD) (Seaborne) Project HMS.

⁶¹⁴AMC GO No. 197, 1 Nov 74.

⁶¹⁵(1) 1st Tc Bn, Historical Summary, 31 March 1975, Annex A, op. cit., p. [97]. (2) [Ed.], "Light Observations," Aircraftsman, Vol 6, No. 2, p. [4].

Completed 14 January 1975, this audit showed the required zero balance on all property book pages as of the last transaction. The battalion thereupon returned all property to the appropriate supply channels.

The second action entailed the shipment of various CCB momentos to the US Army Transportation Museum at Fort Eustis, Virginia. On 7 February, the first shipment took place, consisting of a CCB model, plaques, two motion picture films and various charts. On 31 March 1975, the battalion's colors also went to Fort Eustis.⁶¹⁶

On Monday, 31 March 1975, formal inactivation of the battalion took place. After a brief preliminary ceremony, LTC James A. Greer, the battalion commander, passed the battalion's colors to COL Joe W. Campbell, the CCAD commander. The act concluded the last bit of the FAMF structure, passing it into history. Only a painting of the ship and the ship's bell remained as momentos at the CCAD.⁶¹⁷

Conclusion

In reviewing the FAMF story, one continually comes to the notion that, were it not for the sake of a few dollars, the CCB might still be on duty. The main reason for this feeling is surely the heavy "home team" flavor of most of the sources, which include a large number of

⁶¹⁶1st Tc Bn, Historical Summary, 31 March 1975, op. cit., pp. 16-17, and Annex A, pp. [97-98].

⁶¹⁷[Ed.], "Battalion Inactivated," Aircraftsman, Vol. 6, No. 8 (4 Apr 75), pp. [1, 3-6].

studies commissioned to do nothing more than promote the FAMF.⁶¹⁸ If only its weight is considered, this materiel is overwhelming.

Let us, however, consider not the weight, but rather the main contention point of the materiel: money. Time and time again, the material tells us, the FAMF was a cost-effective operation; indeed, by virtue of its "short-stop" position and its unique capabilities, the CCB was paying for itself every year and-a-half. Unfortunately, however, the DA never did find this reckoning to be fully acceptable, and it eventually torpedoed the CCB on economic grounds.

Why, then, did the FAMF proponents keep hewing to such grounds for justifying the FAMF's existence? There was a good immediate explanation: the DA insisted upon it. There were, moreover, at least three factors which made supported economics as a formal basis for judgement. These three factors were: first, the historic attention that the Army had placed upon cost-consciousness; second, the business-like atmosphere of the McNamara years, with appropriate attention being given to the "bottom line"; and, third, the post-Vietnam reductions in so-called "real" expenditures; that is, inadequate raises in spending to compensate for runaway weapons costs.

The combination of these three factors produced a reaction not unlike that of a 150-car freight train just leaving the yards. At first, with Vietnam just getting underway, it seemed both feasible and possible

⁶¹⁸There were 28 APJ studies and reports in the Battalion's files alone in Corpus Christi, and this collection had an incomplete look.

to commit a whole fleet of FAMF's to compensate for an inadequate inland logistics effort. Within two years, however, the American interest in the conflict had "high-balled," producing not only a growth of American troop strength in Southeast Asia to over one-half million strong, but also building an auxiliary native Army of over one-million men. The logistics apparatus required for this huge war machine necessitated the construction of an enormous and widespread number of "in-country" facilities, and, as the war began to lengthen, these facilities came to take on an ever more permanent cast.

The FAMF thus shortly found itself in a situation that challenged its two major points of economic usefulness, repair and mobility. With large and permanent facilities ashore, the FAMF's share of the total aviation repair workload in Vietnam amounted to only about two percent at that workload's peak. As the land facilities, moreover, had spread along Vietnam's length, the FAMF's mobility was hardly ever used; indeed, the ship spent most of the war riding at anchor off Vung Tau, a port adjacent to Saigon.

The FAMF had apparently become superfluous. This statement, however, once again only takes into account the economic viewpoint: that is, why pay the MSC several million dollars a year to operate a floating platform on which work is done, when that work could very well be accomplished on shore without need for the crew's services? The answer was that the ship's mobility, though by-passed in the current tactical situation, remained an important strategic tool. To keep the tool handy, the ship must be kept active, and what better place to do so than in a war zone?

Unfortunately, this was not the answer given by FAMF apologists. Instead, they insisted, over and over, that the FAMF was indeed operating economically, that the type of services it was providing were unique, and that it could move up and down the coast, almost at will. The first two of these points, though, could not be "proved," especially after the mammoth "in-country" logistical effort was made, and the third was only shown once in six years, on a ten-day March 1971 diversion from Vung Tau to support LAMSON 719. The key emphasis, in short, should not have been to focus upon what the FAMF was doing, but instead to have insisted upon its capabilities. This approach was not taken.

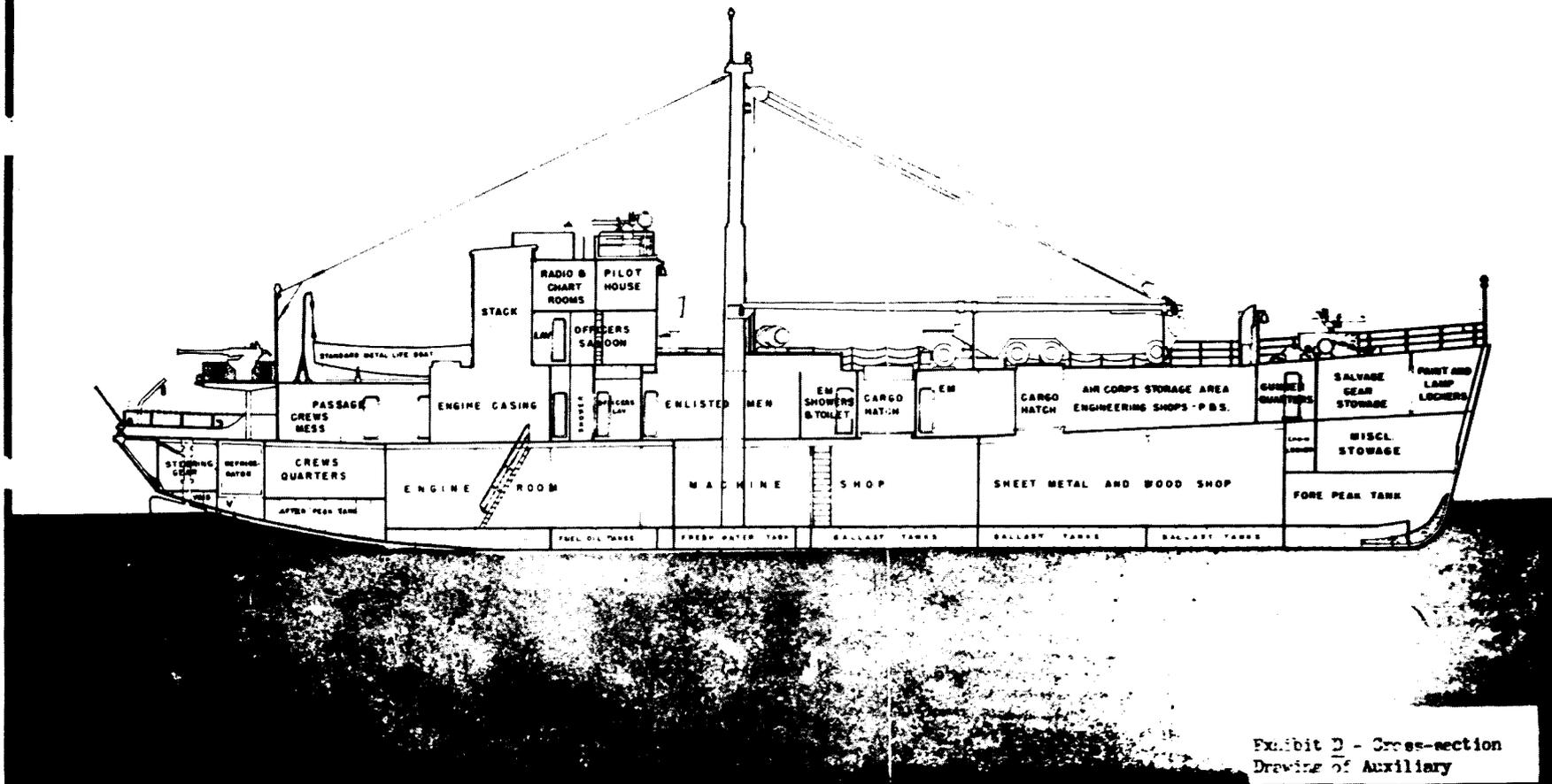
Before we conclude this economic review, let us consider a potential threat to the FAMF's economic justification (and to its mobility as well). This threat was the airmobile repair shop concept, which entailed the airlifting of entire maintenance sections to the front lines. Technologically distant when the CCB first deployed to Vietnamese waters, this concept gained credibility with each jump in airlift capabilities. Finally, as the CCB was being stripped of her repair equipment, certain shops were set aside for just such potential airlift use.

Still, for most of the FAMF's days, the airmobile concept remained only a remote rival, much less a threat, but it is mentioned for two purposes. The first is the rather staid one of completeness. The second, however, is for the purpose of illustration, for what is said of the airmobile concept might be said of the whole FAMF tangle of economic arguments. That is, they were really moot points.

Why is this so? It is because the FAMF proponents were correct in their assessments of a few millions as paltry. In these days, with the Army proposing to field expendable scout helicopters at one million dollars each, with the Navy spending two billion dollars for one aircraft carrier, and the Air Force devoting 85 million for every B-1 Bomber, the eight million per year is paltry--less than one-tenth of one percent of the annual defense budget. No, lack of money was not the main reason for disestablishing the FAMF, but only a convenient pretext.

The real reason that the FAMF came to grief was that it never succeeded in passing from issue to accepted fact. The first major sign of this dilemma appeared late in 1966, when the conversion of the second FAMF was postponed for lack of conclusive cost-effectiveness evidence from FAMF-1. The continuing mass of justification that followed not only never did get a FAMF fleet afloat, but it also failed to preserve the only FAMF in service. It can only be concluded that the DA never accepted the concept itself, and that it was able to implement its non-acceptance by successfully dwelling upon the FAMF's supposed cost-ineffectiveness. Had the FAMF really been wanted for its strategic possibilities, the DA would have found the money for it, and this story would not now be at an end.

ARMY AIRCRAFT MAINTENANCE SHIP



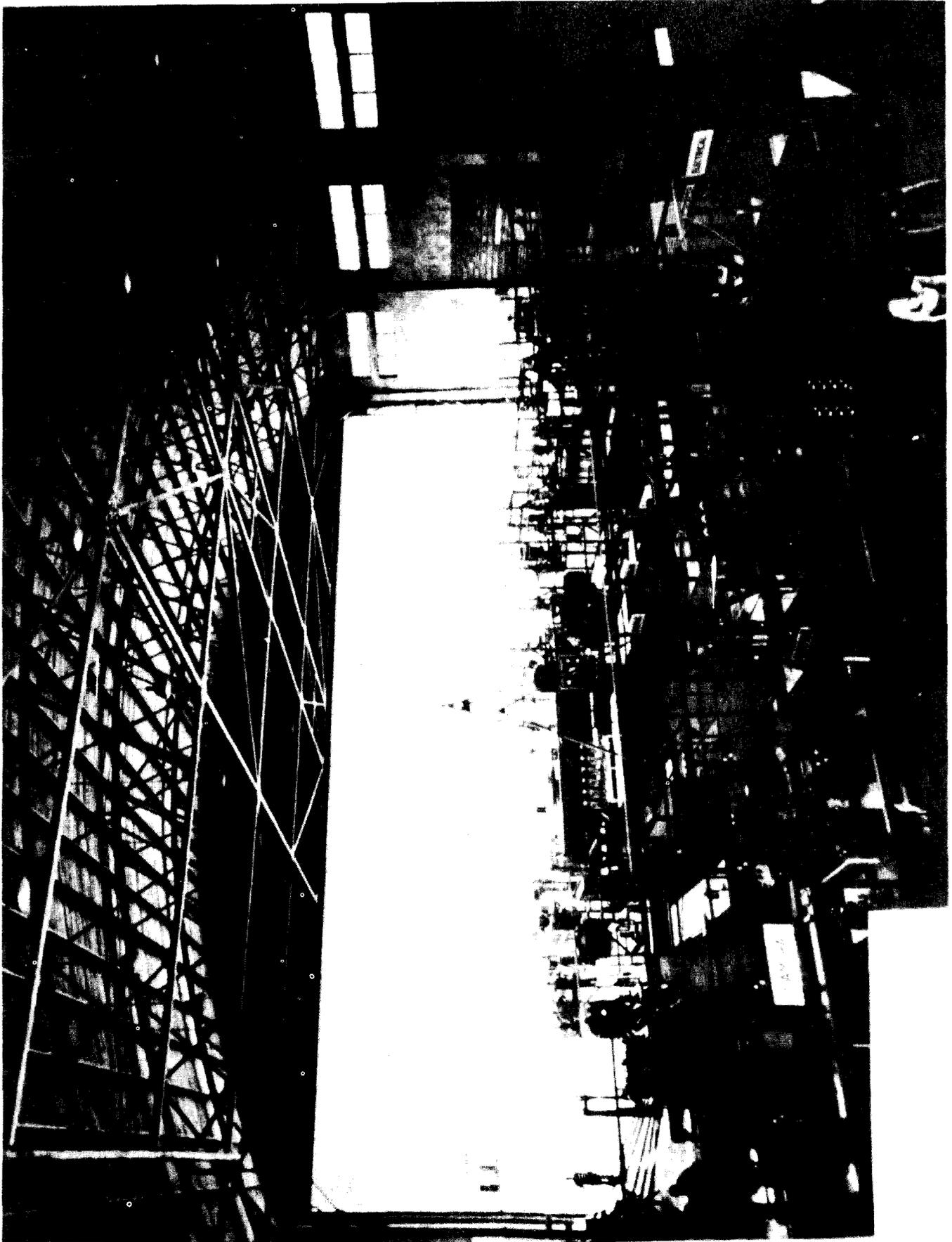
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Exhibit D - Cross-section Drawing of Auxiliary

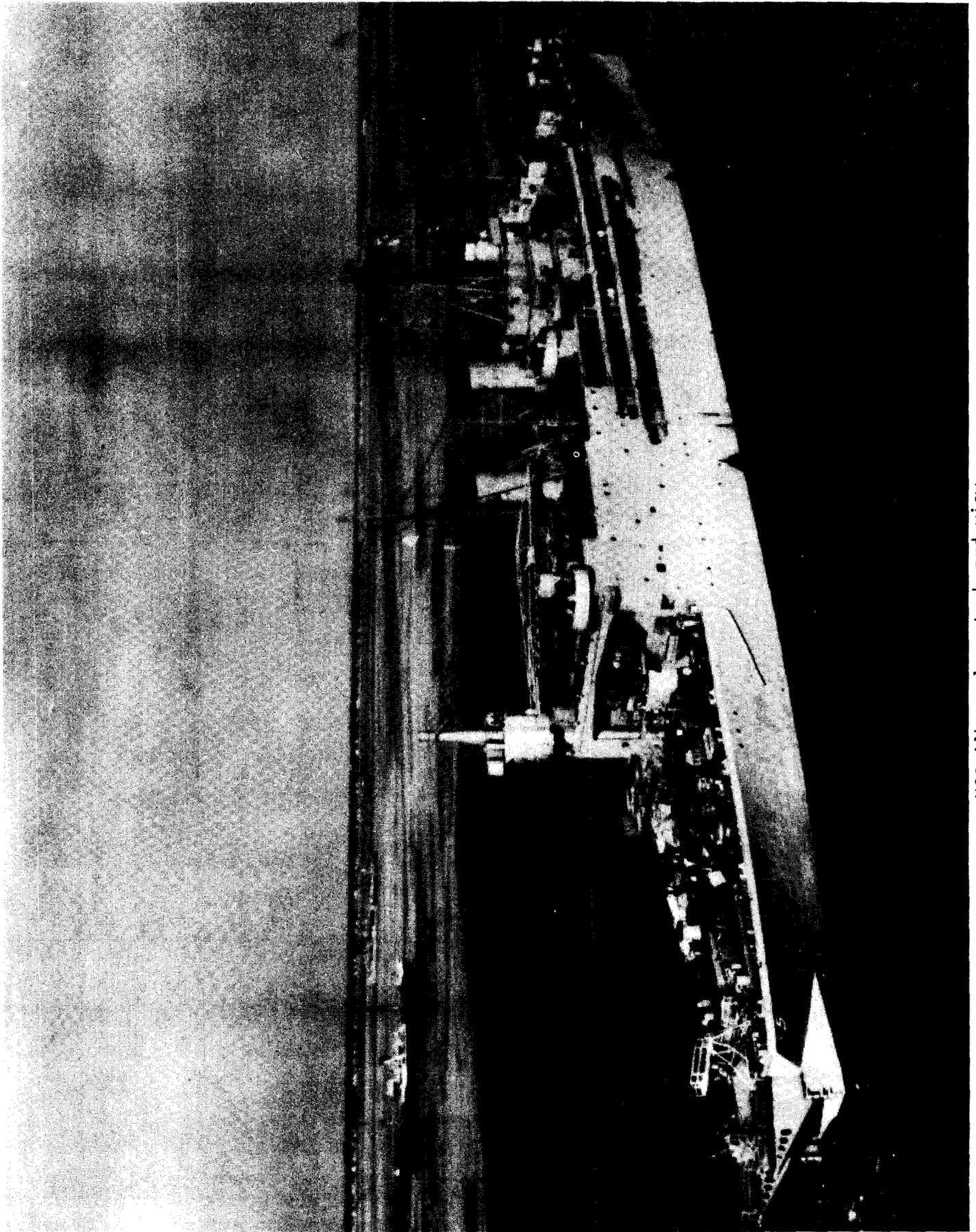
Auxiliary Maintenance Ship.



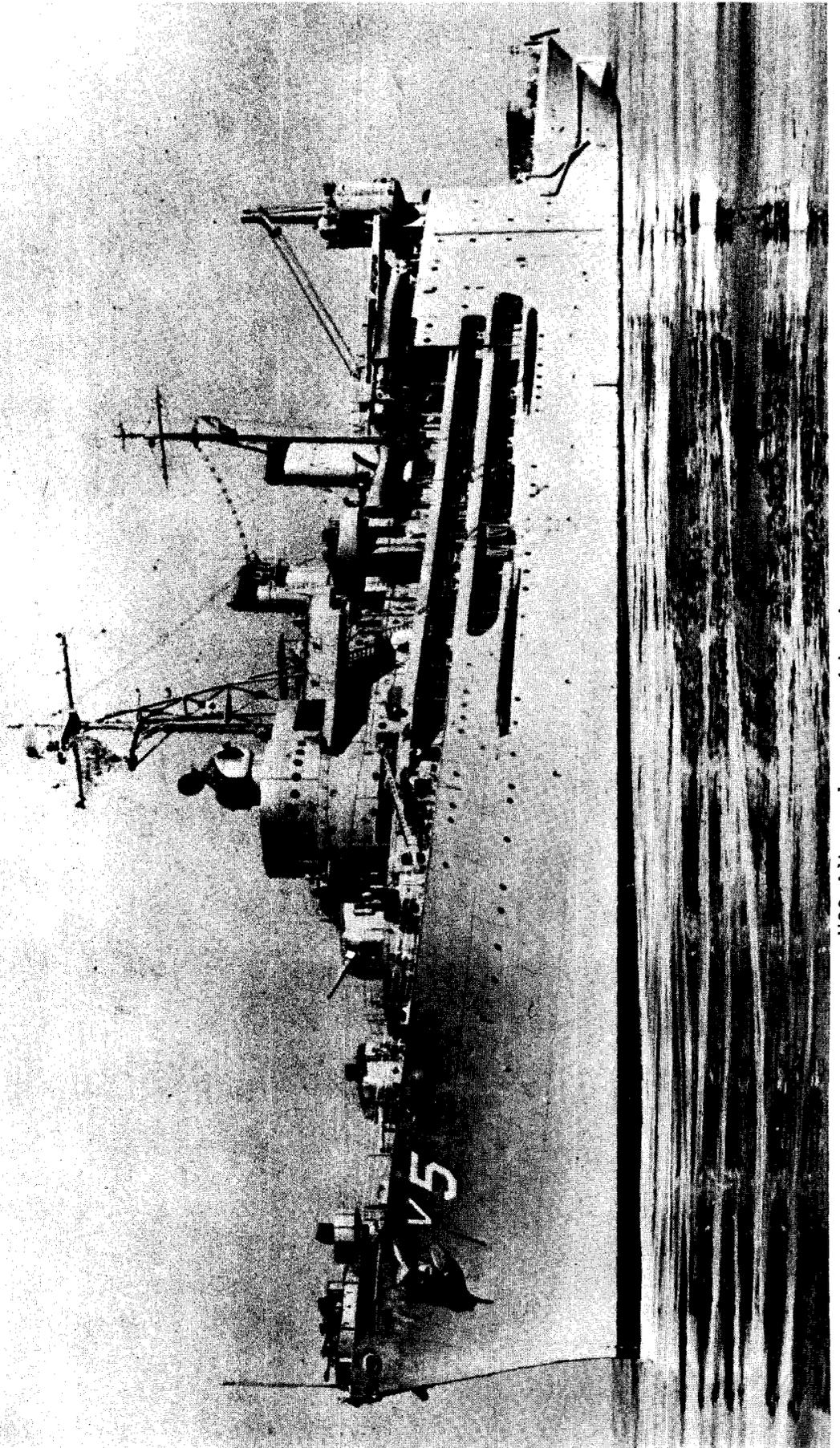
Liberty U.S.S. Rebecca Lukens on sea trials.



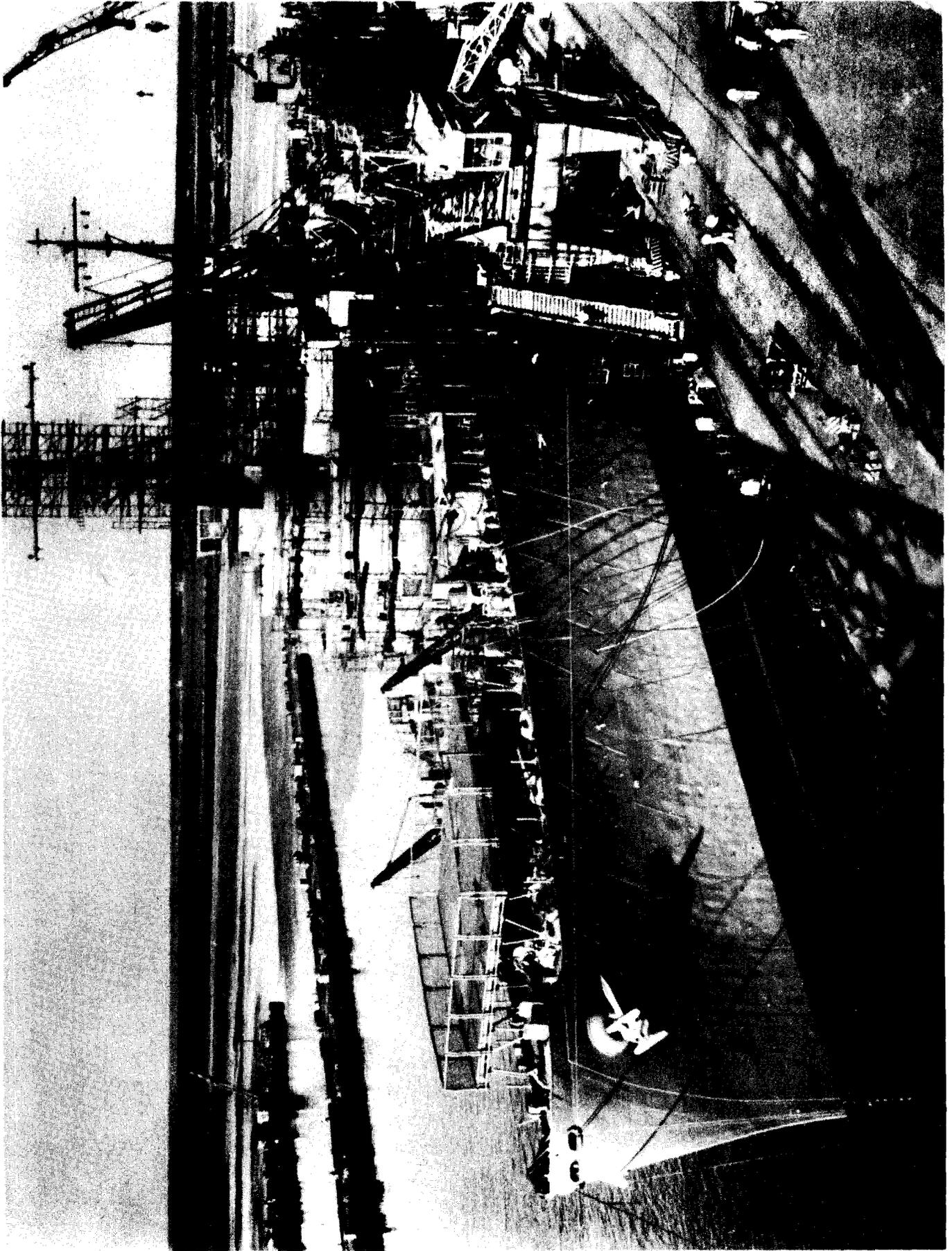
Repair Ship Mock-up, Bates Field, Alabama.



USS Albemarle, starboard view.



USS Albemarle, portside view.



USS Albemarle being converted to the USNS Corpus Christi Bay at Charleston, South Carolina.



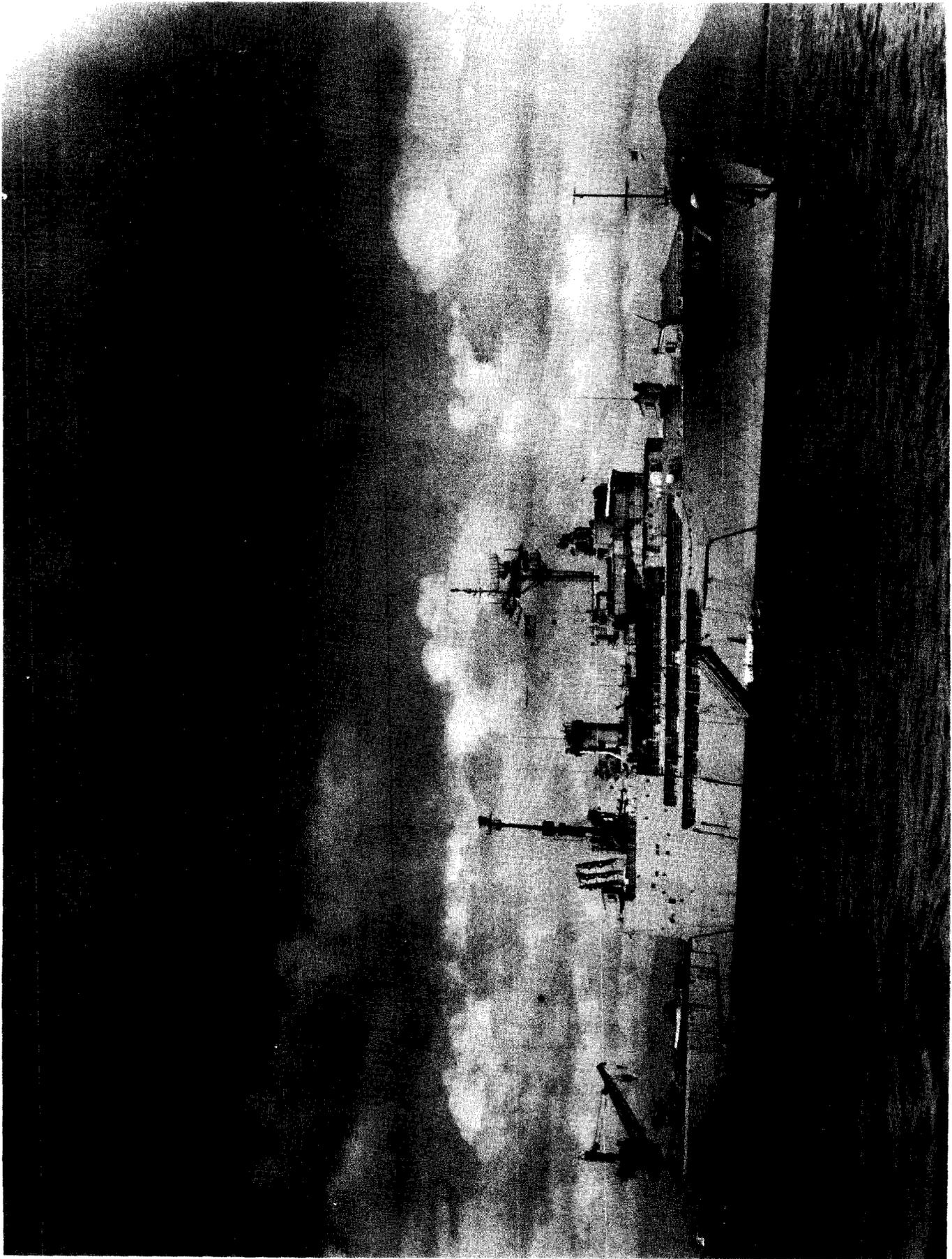
FAMF supporters. From left, GEN Harold K. Johnson, Chief of Staff, Army; COL Sullivan, PM; and GEN Besson, CG, AMC



COL Sullivan talking with the man probably most responsible for the CCB conversion, the Honorable Mendel Rivers, Democrat, South Carolina. . . .

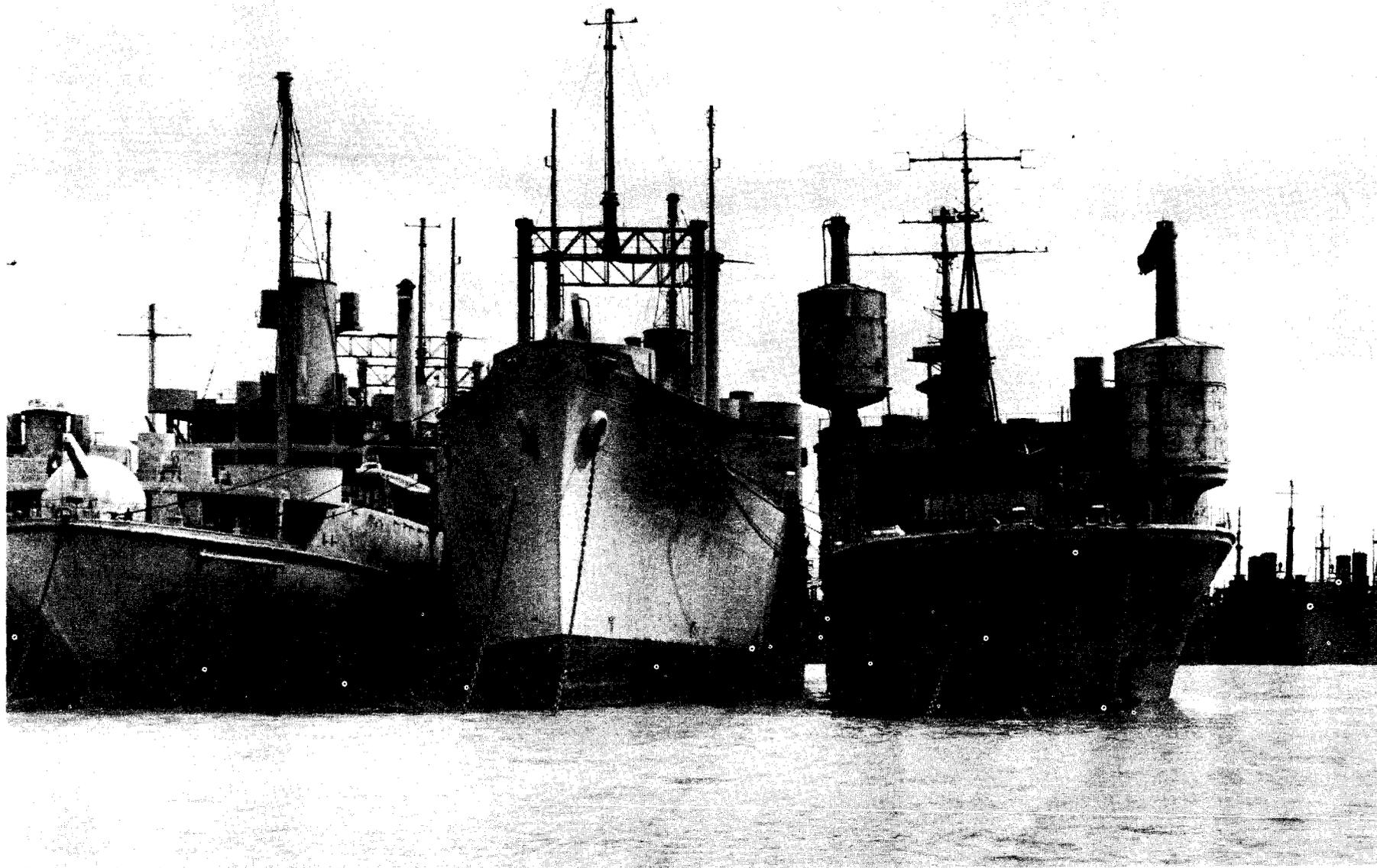


Warrant Officer Robert Ethridge talks to Representative Rivers

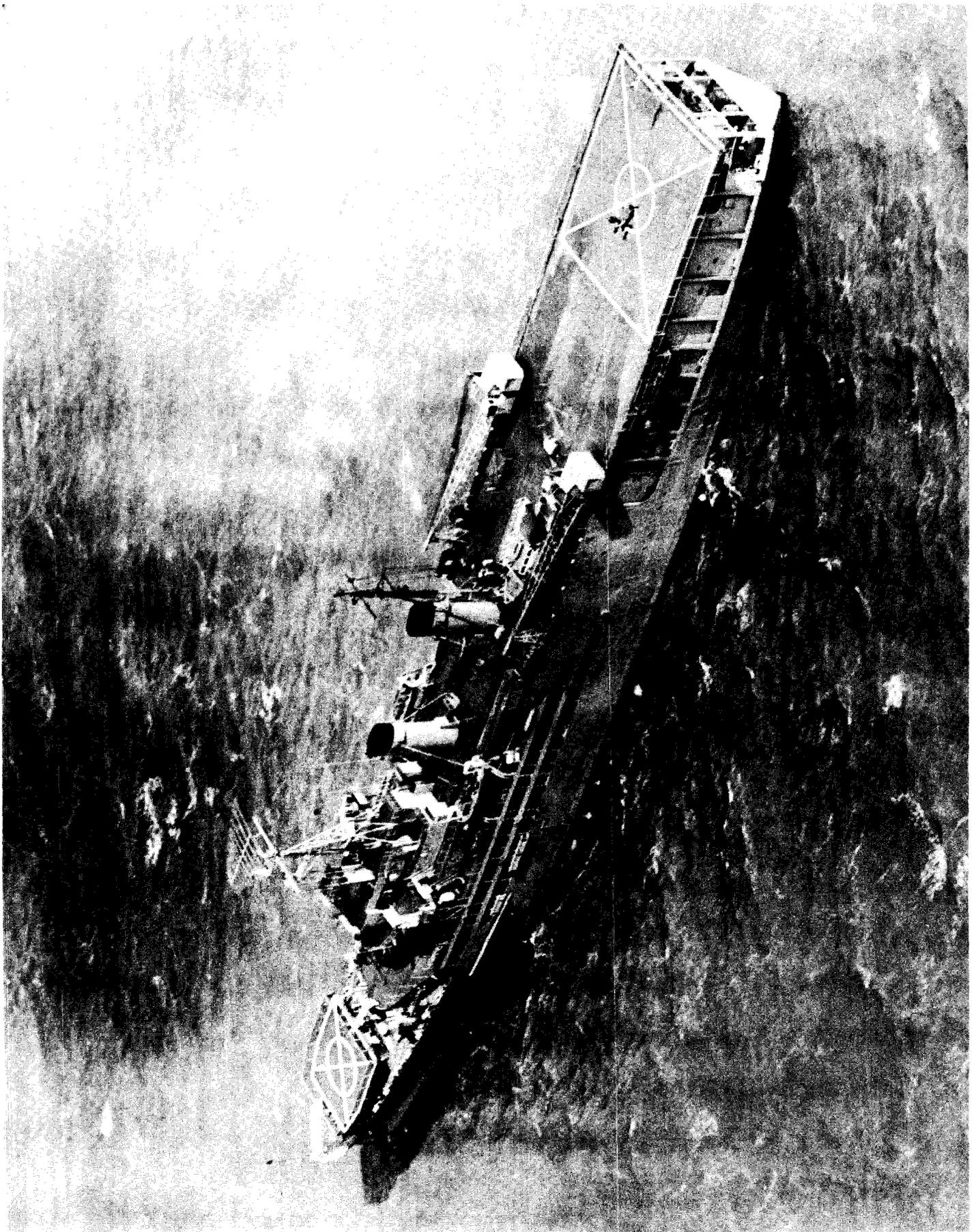


USS Currituck, AV-7, starboard view. The AV-7 was a strong candidate.

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FOR PUBLICATION
NAVAL AIR FORCE
NAVAL AIR FORCE



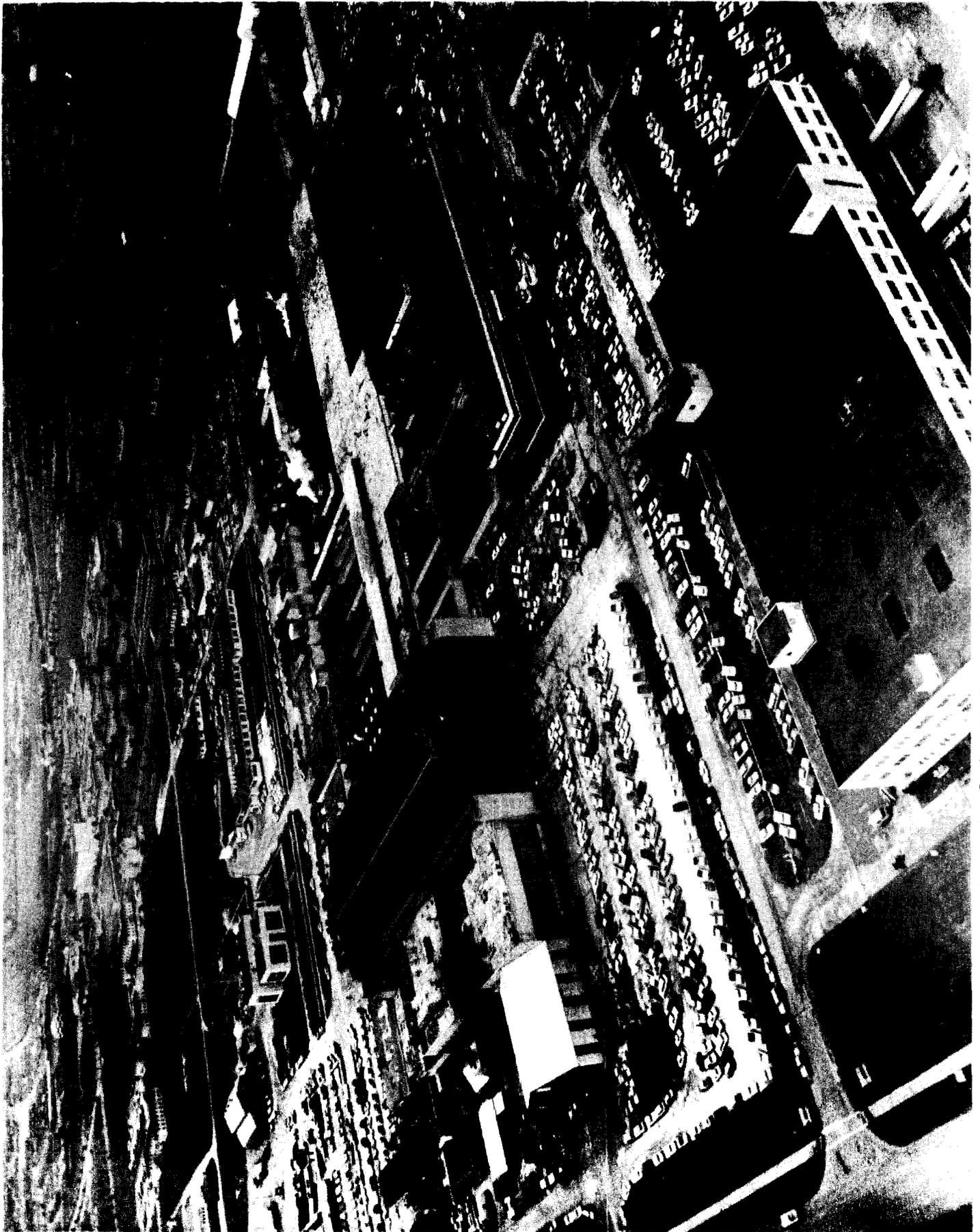
The Curtiss moored with two of its sister ships, both of which were also conversion candidates.
From left: The USS Hamlin, AV-15; the USS St. George, AV-16; and the Curtiss.



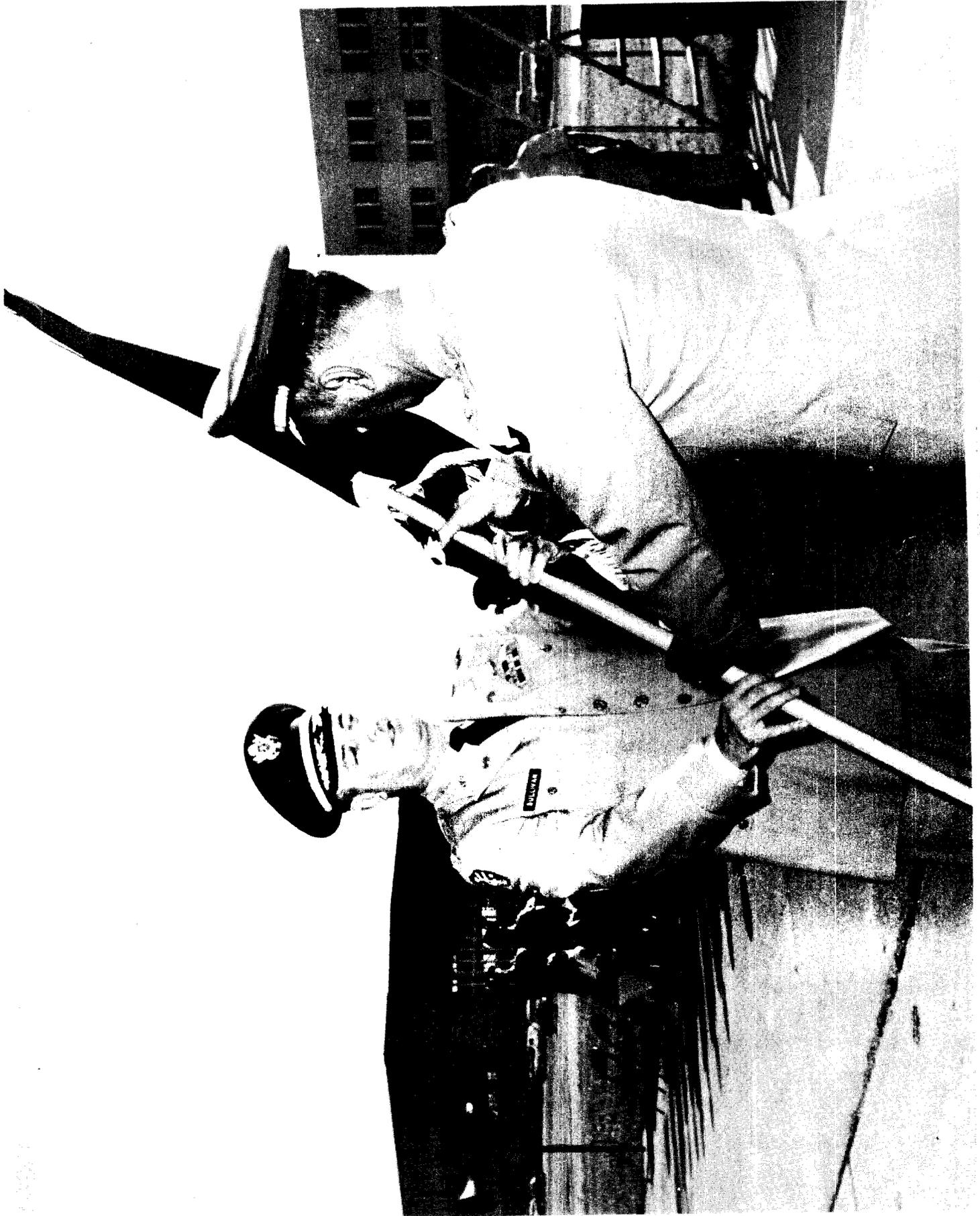
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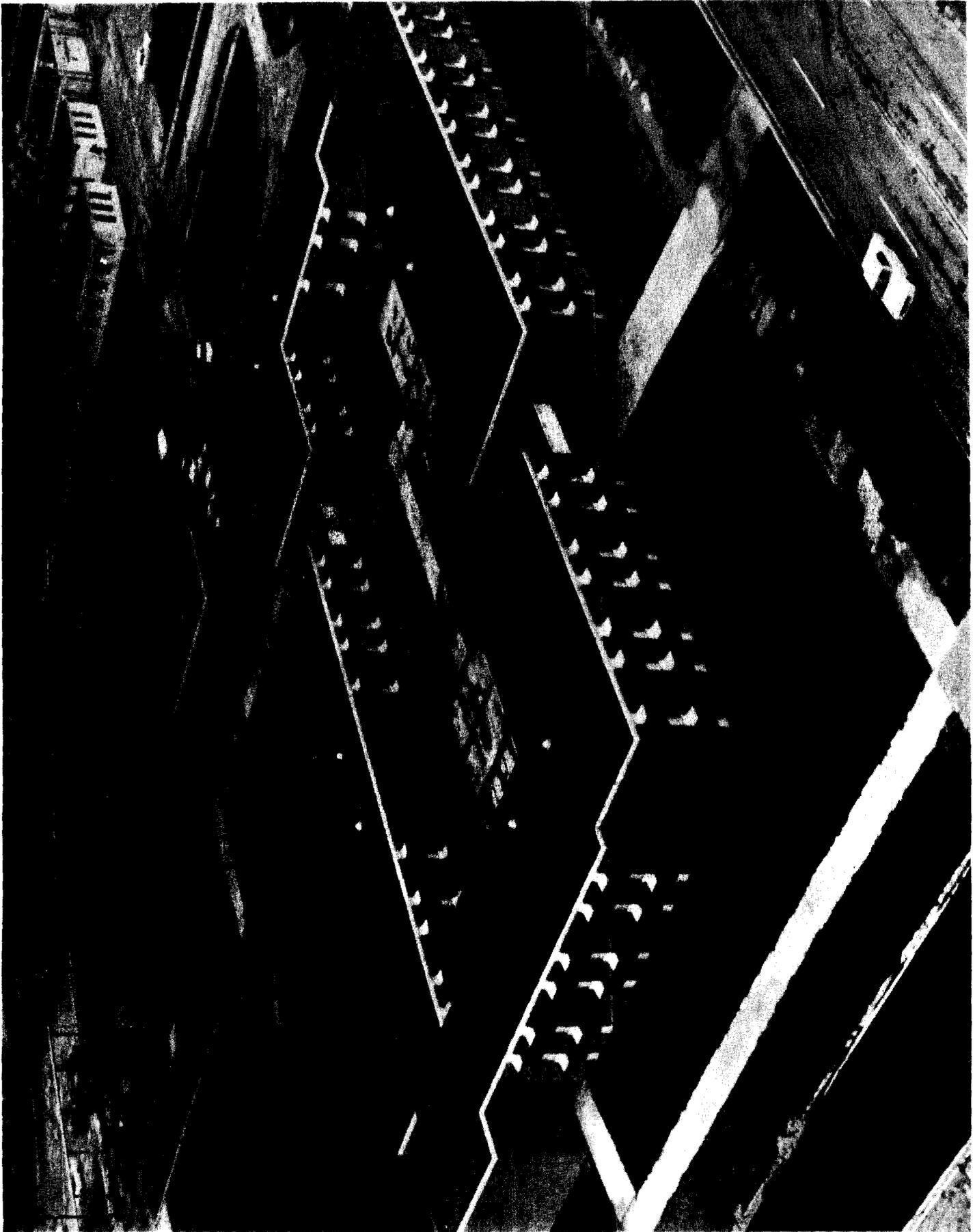
A distinguished visitor to the CCB: GENERAL William C. Westmoreland, CG, USARV.



ARADMAC Support of the FAMF: Aerial view of the ARADMAC.

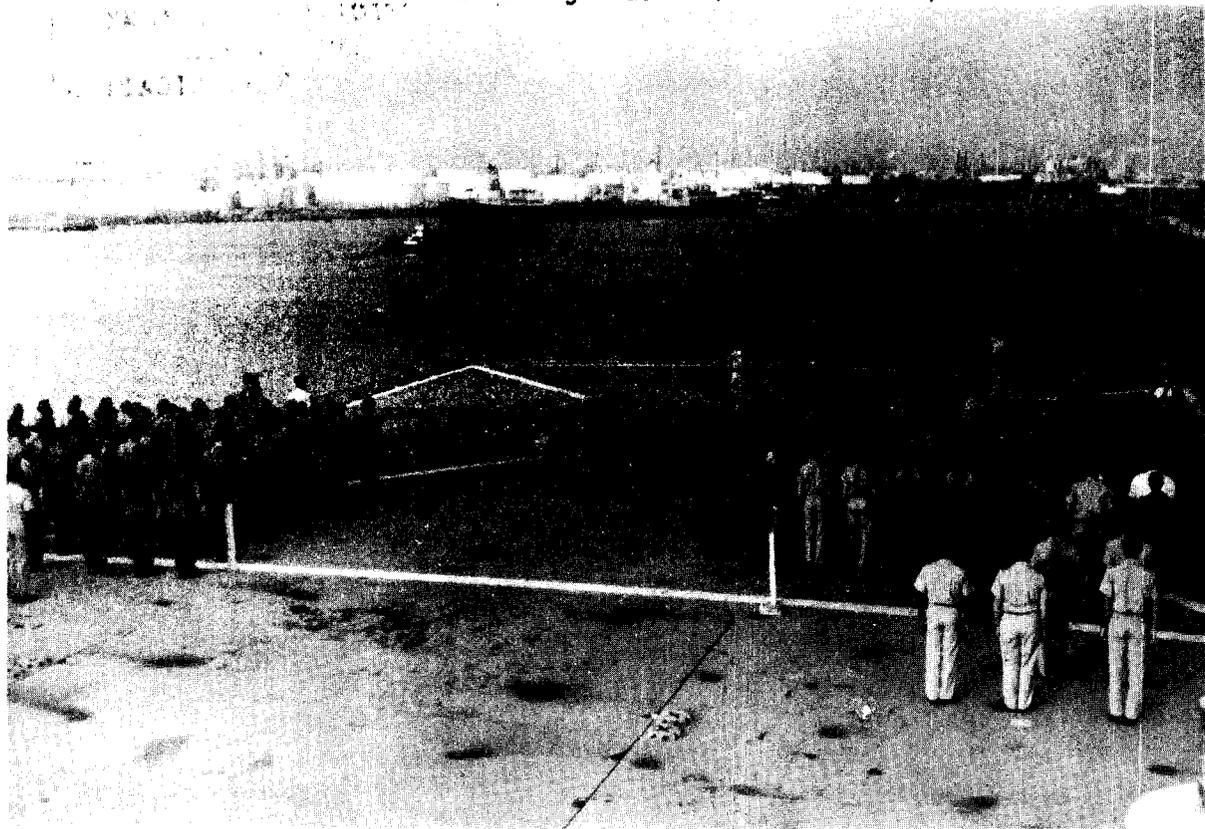


COL Sullivan participates in 1st Materiel Group activation.



The FAMF's new barracks at the ARADMAC.

FAMF De-Commissioning: a. Shipboard ceremony.



b. SGM Kaylor and LTC James A. Greer, last commander of the battalion

