STRENGTHENING
USAF
AIRLIFT FORCES
1961-1964

by

George F. Lemmer

USAF Historical Division Liaison Office

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FOREWORD

Concurrently with the buildup of its general purpose forces to deter or win limited conflicts instigated by Communist nations, the Air Force strengthened its airlift forces appreciably. This was a logically necessary step, since Army as well as USAF combat units would depend on efficient airlift to deploy quickly to widely scattered locations where aggression against U.S. allies appeared likely to occur.

Strengthening USAF Airlift Forces, 1961-1964, is an account of the airlift buildup and should be read in conjunction with the author's previous study, Strengthening USAF General Purpose Forces, 1961-1964, in a sense a companion monograph. The writer has emphasized generally the viewpoint of planners in the Office of the Secretary of the Air Force and Headquarters USAF. At the same time, he has discussed the relationship of their planning to the broader national military policy enunciated by the President and the Secretary of Defense. Dependence of the Army on airlift for the movement of its combat units also necessitated close cooperation between Air Force and Army, and this sometimes led to sharp differences of opinion and heated controversy.

Prepared as part of the continuing History of Headquarters USAF, this study is being issued separately to make it available quickly in convenient form.

Max Rosenberg

MAX ROSENBERG
Chief
USAF Historical Division
Liaison Office

C O N T E N T S

I. THE KENNEDY-McNAMARA AIRLIFT PROGRAM

(U) In his first defense message to Congress in March 1961, President John F. Kennedy declared that U.S. military forces should be made strong and mobile enough "to prevent the steady erosion of the free world through limited wars..." The new President believed that since 1945 "nonnuclear wars and sublimited or guerrilla warfare have... constituted the most active and constant threat to free world security." He stated that "our objective now is to increase our ability to confine our response to nonnuclear weapons, and to lessen the incentive for any limited aggression..." This objective required "strong, highly-mobile forces...with a substantial airlift and sealift capacity..."

(U) The statement that the United States needed to increase the mobility of its conventional military forces was an essential part of the Kennedy military policy and pointed the way toward what the new Secretary of Defense, Robert S. McNamara, later called a 100-percent increase in airlift capacity by the end of 1964. This, combined with the buildup of general purpose forces,* constituted the most significant additions to USAF strength since the advent of operational intercontinental ballistic missiles. Increased mobility also added fully as much to the strength of Army ground forces.[1]

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*For a discussion of the buildup of conventional forces, including the rationale for this buildup, see companion study by George F. Lemmer, Strengthening USAF General Purpose Forces, 1961-1964, (AFCHO, 1966).

(U) In the Kennedy-McNamara strategy, the activities of USAF airlift forces were closely related to those of the general purpose tactical forces. Men and equipment were to be held in a central reserve and deployed quickly to world trouble spots whenever crises arose or threatened to arise. The mere fact that the United States possessed highly mobile, quick-reacting forces might, it was hoped, deter limited aggression--even the "wars of national liberation" advocated by Soviet Premier Nikita Khrushchev in January 1961. Equipment and supplies might also be prepositioned in areas threatened by aggression, and the men flown in later when a crisis impended. Secretary McNamara believed that world conditions dictated a blend of these methods for the foreseeable future, and that this strategy was far more effective than any alternative.

(U) For many years the United States had stationed large general purpose forces abroad, especially in Europe and the Far East, and prepositioned substantial quantities of materiel in these areas. Construction of forward bases also was undertaken in many oversea areas. Most important, from the viewpoint of the new strategy, the military services maintained a central reserve of general purpose forces in the United States and sought to acquire the needed airlift to move them promptly to wherever they might be required.[2]

(U) In 1961 the chief transport organization was the Air Force-managed Military Air Transport Service (MATS). Its mission was to maintain air transport forces, bases, and routes in being and provide strategic airlift to meet the needs of the Department of Defense (DOD), especially in

times of international crises or war. MATS was also responsible for directing the Civil Reserve Air Fleet (CRAF) that would be made available to the Government in an emergency. In addition to CRAF, transport units of the Air National Guard (ANG) and the Air Force Reserve (AFRes) were earmarked for assignment to MATS when needed.

(U) Troop carrier and intratheater assault units assigned to the Tactical Air Command (TAC) in the United States and to the unified oversea commands, principally the United States Air Forces in Europe (USAFE) and the Pacific Air Forces (PACAF), also were available. Besides furnishing necessary assault airlift for oversea combat commands, these units provided airborne training and, as part of TAC's Composite Air Strike Forces (CASF), were prepared to deploy anywhere on short notice.

(U) Logistic support squadrons (LSS) of the Air Materiel Command (AMC), which on 1 April 1961 became the Air Force Logistics Command (AFLC), provided airlift for the deployment of nuclear weapons to all Air Force combat commands. The squadrons maintained a varying alert status which was determined by the existing international situation.

(U) ANG and AFRes air transport units were to furnish a substantial amount of the airlift of men and supplies and to evacuate sick and wounded. They also were to provide a large share of the air transportation for Army airborne exercises and other training and support the oversea movement of personnel, equipment, and supplies for both Army and Air Force. In times of national emergency or war, these units could be called into active service with regular USAF airlift forces.* 3

*In addition, the Army and Navy maintained a few transport units. Those of the Army were mainly helicopter and light transports, such as the CV-2 Caribou, to be used in the battle area by regular Army combat organizations.

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Airlift Weaknesses

(U) In early 1961 the Secretary of Defense, the Joint Chiefs of Staff (JCS), and the Air Force agreed that U.S. airlift forces were inadequate, both in number of planes and their quality.* A JCS study of June 1961 stated that since airborne forces would be needed to furnish mobility in any type of war, not only was airlift inadequate but the Army's airborne forces also needed to be reorganized and modernized. A USAF study of the same month, based on operational plans to defend Southeast Asia in fiscal year 1962, showed that there would be a sizeable deficiency in strategic airlift during the first 20 days of conflict. The most critical deficit would be in military cargo, with serious shortages expected for at least a month. USAF planners saw clearly the urgent and growing need to equip transport units with new cargo aircraft that would provide greater capacity, versatility, and flexibility.[4]

(U) At the beginning of 1961 the weakness of airlift was not primarily the lack of planes but of aircraft with the proper size, configuration, and speed to move substantial military forces and their supplies over long distances in a hurry. As early as 1960 the military services and the Office of the Secretary of Defense (OSD) had become concerned about the obsolescence of military airlift, especially of the MATS transport fleet. The C-118's, C-119's, C-121's, and C-131's, although still active, were old, slow, or otherwise unsuitable for modern military airlift. Many of

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*For background on the situation in early 1961, see Charles H. Hildreth, USAF Logistic Preparations for Limited War, 1958-1961 (AFCHO, 1962), Ch. IV.

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them were being released to the Reserve Forces. The C-123, which first flew in 1949, was scheduled for use mainly by counterinsurgency forces in the Pacific. And the C-124 Globemaster, backbone of the MATS fleet, also was a vintage aircraft, having entered the inventory as long ago as 1950. The huge C-133, used mainly for outsize cargo, dated back only to 1957, but it was unreliable and very expensive to maintain.

(U) The C-130, one of the two best transports in 1961, had been in use since 1956 and was limited in range and speed. A much improved version, the C-130E, did not enter the Air Force inventory until April 1962. Illustrating the obsolescence of the airlift fleet was the fact that of 2,396 transports active at the end of June 1961, only 930 were considered "first line." [5]

Early Measures

(U) Even before the advent of the Kennedy administration, Congress had expressed concern about the airlift forces. On its own initiative, it had appropriated $200 million in 1960 to begin modernization of the MATS fleet. Early in 1961, with the support of President Kennedy, OSD and the Air Force instituted a number of actions to obtain more airlift quickly. After obtaining a net increase of over $172 million in the fiscal year 1962 budget for airlift, bringing the total to about $298 million, they delayed the previously scheduled elimination of a number of C-118 and C-124 squadrons. More important, they increased procurement of extended-range C-130E's from the previously-planned 50 to 99 and speeded up production. In addition, the Air Force purchased 30 C-135

cargo planes (later increased to 45), which were modifications of the KC-135 tankers used by the Strategic Air Command. The first C-135 was delivered in June 1961, and deliveries proceeded at the rate of about two per month until the order was completed.

(U) The program presented to Congress in early 1961 by Secretary McNamara and Secretary of the Air Force Eugene M. Zuckert provided for the purchase of 129 new, long-range transports (99 C-130E's and 30 C-135's) in place of the 50 programmed earlier by the Eisenhower administration. Partially offsetting the increases was a reduction in the purchase of the shorter-range C-130B. Secretaries McNamara and Zuckert believed that sizeable additions of modern, long-range transport aircraft would meet minimum airlift requirements until a new all-jet transport--the C-141--became available in early 1965.

(U) Subsequently, in drawing up plans for the first Kennedy defense budget (fiscal year 1963), the Air Staff, Secretary Zuckert, and the JCS agreed on the need for a further expansion of the airlift force. Their recommendations, accepted in the main by OSD in November 1961, included (1) purchase of 3 C-135 squadrons, a sizeable increase from the emergency program launched nine months earlier; (2) procurement of 13 C-130E squadrons; and (3) development and procurement of 13 C-141 squadrons by 1968.* Secretary McNamara also decided to retain a large number of C-124's in the active force until 1965, when the C-141's would begin to enter the inventory.[6]

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*For a short period in 1963-64, the Air Force and OSD planned for 20 squadrons of C-141's.

Airlift Planning

(U) In January 1962 Secretaries McNamara and Zuckert and JCS Chairman, General Lyman L. Lemnitzer, told Congress that currently available airlift, including the CRAF, could deploy significant military forces to any part of the world in a relatively short time. But they agreed that the United States ought to have far more airlift in order to meet the full range of possible, even probable contingencies.

(U) Secretary McNamara referred to a lack of balance in the airlift forces of 1961-1963. The long-range capability was insufficient for the intertheater strategic transport job and the short-range (intratheater) forces also appeared inadequate for the requirements of tactical airlift to the battlefield. He maintained, and nobody seriously disagreed, that the Air Force did not have the air transport capacity to move an Army of the size already in existence, and it certainly could not move one of the size that DOD was planning.

(U) A large part of the load in the initial deployment of an Army division would be made up of large vehicles and heavy guns. Aside from their weight-carrying capacity, the C-118 and C-121 did not have the proper size or shape to carry any significant load of such equipment although they could do a creditable job of hauling men. In later years, when airlift units would be composed largely of C-130, C-133, and C-141 aircraft, this problem would be greatly improved. Nevertheless, many outsized pieces of Army equipment still could not be transported by air.[7]

(U) In early 1962 the Air Force and OSD were basing their hopes for long-range improvement in airlift capability on the C-141, which promised a significant breakthrough in air transport performance. The Air Force expected this plane to carry 20 tons of cargo nonstop for more than 4,000 miles. This heavy-load capacity and long range, coupled with a speed of 440 knots, would make it four times as efficient as the C-118 or C-121. The C-141 promised excellent performance off relatively short runways and, like the C-130, was well suited for airdrop of men and cargo. Secretary McNamara included money in the fiscal year 1963 budget to complete development and testing of the new plane and to make the initial procurement.[8]

(U) A study by the Office of the Assistant Secretary of Defense (Comptroller), which typified the new thinking concerning the possibilities of airlift, led to further investigation. This OSD study argued that airlift capacity was on the verge of a great expansion. Currently, the Air Force could haul 28,000 tons of equipment and supplies from the United States to Southeast Asia in the first 30 days of an emergency; by 1967 it would be able to haul 68,000 to 100,000 tons during the same period. The most important reason for this great increase would be the unprecedented capability of the C-141. This plane and the C-130 would be able to perform well in both the long-range strategic and short-range tactical roles.* The C-130, because of its superior short-field landing and takeoff ability and its facility for airdrop, permitted delivery of large tonnages of dry cargo to an Army in the field. Using these aircraft,

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*Air Force planners were later to challenge this statement. See pp 36. 38.

the armed forces might escape the tight constraints that airlift limitations had placed on deployment plans. Planners needed to reexamine what could be deployed overseas and the time it would require since "the entire lift area offers the prospect of becoming 'unhinged' in ways which will be all to the good."[9]

(U) Secretary McNamara believed that the study raised several possibilities that the Air Force ought to examine carefully. These included the following: (1) troop carrier units should be better manned; (2) newer planes might be used 9 or 10 hours a day rather than the usual 8 to improve efficiency; (3) the C-130 might do much of the job the Army's Caribou was expected to do; (4) more military assistance program (MAP) funds could be used to build and improve airfields in areas where the United States might have to send military forces; (5) the Air Force should develop more efficient techniques for emergency airfield construction and maintenance; (6) the Air Force and Army might enhance the efficiency of airdrops and improve cargo packaging and handling; and (7) more joint Army-MATS deployment exercises should take place.[10]

(S) USAF planners, agreeing that these suggestions deserved careful consideration, acted at once to determine their practicability. However, the Joint Staff and the USAF Directorates of Plans and Operations did not favor an additional proposal that 120 KC-97 tankers which were leaving the active inventory be used to transport petroleum products to Army troops in the field. They believed the KC-97, a bulk POL carrier, was not suitable for unloading in a forward area because of its high

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"footprint pressure" and inability to drop cargo by parachute. Furthermore, the KC-97's were scheduled for conversion into C-97's for use as cargo transports by the ANG. The planners did not want to jeopardize this transfer because ANG strategic airlift capacity would be badly needed in an emergency. They considered the C-124 or the C-130, both of which had greater speed and range than the KC-97 and could carry 500-gallon rubber fuel containers, preferable for this type of mission. Headquarters USAF recommended that the C-130 (A, B, or E models) do this job instead of the KC-97 because of its potential versatility and the relatively large procurement of C-130's that was under way.[11]

(U) In addition to the large airlift capacity being built into the active forces, the Air Force proposed to maintain a very significant capability in its reserve components. AFRes troop carrier squadrons, kept on 24-hour readiness status, performed well in numerous exercises with the Army and during the Berlin and Cuban crises of 1961 and 1962. Throughout the 1961-1964 period the Air Force continued to hope that it could speed up the release of C-124's to the AFRes and get rid of the old C-119's. International crises and fund shortages hampered this effort, but some progress was made.[12]

(U) Upon the declaration of a national emergency, the Secretary of Defense could call upon about 340 commercial aircraft in the CRAF. During 1961 the Air Force improved the CRAF by insisting that airlines awarded MATS contracts commit themselves to support it, as provided by the 1961 appropriations act. MATS demanded that aircraft earmarked for CRAF service be up-to-date cargo planes; as a result, by February 1963 about half these

planes were modern jets. While their cargo-carrying capacity was limited by their configuration, their passenger-carrying abilities were substantial. The CRAF fleet could become available within 48 hours after the declaration of a national emergency. Its primary job would be to move military personnel, especially men prepared to use equipment prepositioned in advanced areas. Later, CRAF would provide resupply in those situations where packaged, high-density cargo represented a large share of the load. They would take over many of the routine oversea runs left untended by MATS aircraft sent on more urgent missions. During 1961-1963 MATS devoted more of its efforts to meeting specific military airlift requirements, shifting routine traffic to contract carriers.[13]

[redacted] Despite the emergency program of early 1961 and the urgency of the subsequent buildup, as late as September 1963 airlift capacity appeared severely limited. At this time a new study of available U.S. forces by the Office of the Assistant Secretary of Defense for International Security Affairs (ISA) helped convince the Air Force that the inability to react quickly was the chief weakness in the nation's capacity to wage limited war, especially when more than one conflict occurred simultaneously. This weakness was based on an inability to deploy rapidly because of lack of airlift. The avowed aim of the administration was to be able to fight two or more wars at one time and it considered such a contingency likely. It added that the ability to move conventional forces quickly was the best way to avoid a local nuclear war, which might disrupt the U.S. system of alliances and possibly lead to general nuclear war.[14]

Evolution of the Program

The airlift buildup calling for procurement of 3 C-135, 13 C-130E, and 13 C-141 squadrons, approved by Secretary McNamara in November 1961, continued with only moderate changes through 1964. Those changes which did occur, although disappointing to the Air Force, were justified by Secretary McNamara as a means to save money, or on the grounds that by postponing procurement a few years the country would get more effective airlift later on when new planes became available. At times, the Secretary overrode the wishes of the Air Force, as well as of certain Congressmen, who did not want to take this calculated risk.

By the end of June 1962 the Air Force had purchased 40 C-135's (bought "off the shelf") and by the following June the maximum of 44 were in use. By June 1962 six C-130E's were on hand; 80 a year later; and 228 of the 307 on order had been accepted by June 1964. In 1964 three squadrons of C-118's and one of C-121's were replaced by C-130E's, completing Secretary McNamara's emergency buildup program. Six C-141's had entered the inventory by June 1964, but the first squadron of 16 planes would not be operational before the end of June 1965.[15]

The older, lower-performance C-130A's and B's reached their maximum number of about 320 by June 1962. These aircraft were classified as TAC troop carriers or assigned the tactical cargo airlift mission. All of these, and eventually most of the C-130E's, would be put to this use when enough C-141's became available to assume the strategic airlift mission. During the initial deployment in an emergency, however, as many

C-130's as could be provided would be employed by MATS for strategic airlift.

[redacted] Beginning in fiscal year 1965 the C-135's were to be relieved of airlift duties over a three-year period and assigned to missions in the Air Weather Service and as flying test beds in the Air Force Systems Command. By June 1964, because of their ability to use small airfields, many of the C-123's had been or were being transferred to the Special Air Warfare forces or to the Pacific.* On this date the C-124's and C-133's were no longer considered first-line transport aircraft, but 374 of the former and 44 of the latter were still active. Forty C-133's and 36 C-124's were scheduled to remain in the active inventory through fiscal year 1969. The C-124 would gradually dwindle from 180 active in June 1965 to the 36 in 1969. These would be used only for special missions. By this time there would be 13 squadrons of C-141's (208 aircraft plus spares) on hand to assume the main strategic airlift burden. (Shortly after the beginning of fiscal year 1966, the C-141 program was increased to 14 squadrons.)+ [16]

*The Air Force planned to modify 120 C-123's by installing jet engines, anti-skid brakes, and a stall warning system, thus giving them short take-off and landing characteristics. By 1966 they would be able to deliver cargo as far forward as airfields could be built.

+See Appendices I and II.

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II. AIRLIFT CONTROVERSIES

(U) A number of controversies relating to the most effective use and the required amount of airlift arose during 1961-1964. These disputes had many facets, but they all revolved around three basic issues. First, accepting the administration's strategy of mobility, the Air Force contended that too little airlift was being programmed to satisfy the requirement. Second, the Air Force believed that the Army's attempts to achieve greater mobility for its combat units were infringing upon or duplicating traditional USAF functions. Finally, the Air Force and OSD had strong differences over the proper degree of centralized control and whether airlift should be organized according to the type of planes in the inventory or according to the way it was used. The Air Force maintained that there was a fundamental difference between strategic airlift and tactical or assault airlift.

Airlift Requirements

[redacted] Through 1962 and 1963 the Air Force feared, in view of the quick-reaction and simultaneous two-theater operational concepts urged by OSD and the Army, that Secretary McNamara was permitting a serious deficiency to develop. Headquarters USAF argued that programs approved in late 1961 would not meet 1962 requirements until 1967. In the past, airlift requirements usually had increased faster than capability and

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the Air Force thought the assumption that 1962 requirements would remain valid for even one year, much less six years, was extremely risky.

[redacted] In addition to the rapidly growing burden of providing logistical support to tactical fighter units, Headquarters USAF cited the following facts as tending to increase the air transport job: (1) the Army was adding about 3,500 troops to its airborne division structure and doubling the tonnage of its equipment and supplies; (2) it was tripling the tonnage required to support a heavy infantry division; (3) the Strategic Army Command was increasing the number of its divisions from two to six and eventually eight, and trying to make them as air mobile as possible; (4) the increase in active Army divisions from 14 to 16 would inevitably call for more airlift; and (5) the number of people military strategists generally thought it necessary to move by air was rapidly accelerating. For these reasons the Air Force advocated six more C-130E squadrons by 1967 and four C-141 squadrons by 1968. This would still fall three squadrons short of the goal set forth in the Joint Strategic Objectives Plan for 1967 (JSOP-67).[1]

[redacted] This issue was postponed about a year, but it came to a head in November 1963. At that time Secretary McNamara proposed to cut out the six squadrons (114 aircraft) of C-130E's the Air Force requested for the fiscal year 1964-65 programs and to buy seven additional squadrons of C-141's (139 aircraft) in fiscal years 1968-69. Secretary Zuckert and the JCS concurred in the C-141 increase but opposed eliminating the C-130E squadrons. As an alternative, JCS recommended deletion

of only two C-130E squadrons and holding enough C-124's in the force to offset the loss. McNamara accepted this compromise.

(U) Although Secretary Zuckert said he would be satisfied if the Air Force got all of the C-141's, both he and Gen. Curtis E. LeMay, Air Force Chief of Staff, thought this compromise was a backward step because it would slow down the rate of airlift modernization. Representatives Daniel J. Flood of Pennsylvania and Robert L.F. Sikes of Florida severely criticized Secretary McNamara's decision at a time when more airlift was so badly needed. But the Secretary replied that there would be more airlift in the long run, since the Air Force would have the same number of squadrons and two more of the new ones would be C-141's. The Congressmen, however, and to a lesser extent General LeMay, disliked the 18-month wait for C-141's while continuing to use the old C-124's. Congressman Flood thought the Air Force was lucky to lose only two squadrons of C-130E's, but all three men doubted the wisdom of this decision.

(U) The AFRes also experienced a setback because it had expected to get the C-124's to replace about half of its obsolescent C-119's. At this time the Air Force and OSD also decided to phase the 40-odd C-135's out of the active force. Although possessing good speed and range, the C-135 had been procured only to provide an interim modernization since the plane had not been designed for the sustained, heavy work typical of MATS operations. Since C-124's would also have to make up this temporary loss, the AFRes would experience substantial delay in getting rid of its C-119's.[2]

(U) In the field TAC and the U.S. Strike Command (STRICOM)* found that the demand for both strategic and tactical airlift continued to far outrun resources. Because of the shortage, in March 1963 the STRICOM commander, Army Gen. Paul D. Adams, had to set up very strict priorities for the use of airlift. General Adams established the following priorities: (1) OSD-JCS missions, including STRICOM exercises; (2) Air Force unit training; (3) Army-Air Force tests; (4) Army airborne unit training; (5) TAC internal airlift; and (6) training of Army men in transport methods and techniques.

(U) In August 1963 TAC had 187 C-130's (its chief airlift plane), but so many were committed to special missions, engaged in combat crew training, being modified or repaired, or otherwise not operational, that it could count on only about 79 for operational use in an emergency. If 29 percent were deducted for routine maintenance, only 56 planes could be depended upon. Plainly, TAC was hard pressed to meet its requirements. It very much desired a speed-up in the procurement of C-130E's and C-141's, because it would then get additional C-130E's from MATS. Since TAC would lose all its C-123's to special air warfare forces, mainly for use in Vietnam, the situation was more critical than had been anticipated.

(U) The prospect improved late in 1963, however, and by December the number of TAC's operationally ready C-130's for the first time

*A new unified command created in December 1961, STRICOM was composed of the combat units of TAC and the Strategic Army Corps (STRAC). It could also draw airlift units from MATS. Its mission was to respond quickly, with whatever forces were necessary, to threats against the peace anywhere in the world. (See DOD Annual Report for FY 1962, p 7.)

exceeded 100. This greatly pleased General Adams, who was eagerly looking forward to further improvement as aircraft production increased. The administration's policy of pulling certain oversea combat units back to the United States, or rotating them between the United States and oversea stations, enabled TAC to obtain control of transport planes formerly assigned to USAFE and PACAF.[3]

(U) In February 1963 Secretary Zuckert and General LeMay reported to Congress that airlift modernization, begun in 1961, had already paid large dividends, opening a new era in mobility for U.S. military forces. The Secretary described how in November 1962, at the height of the Cuban crisis, the United States had been able to transport desperately needed equipment to India, then under attack by the Communist Chinese. In 10 days, beginning on 2 November, 10 C-135's hauled about 1,000 tons of automatic weapons, ammunition, and radar equipment from Rhein-Main AB, Germany, to Calcutta. The average flight time was 14½ hours. General LeMay described how the use of the C-135 and C-130E speeded up the deployment of Army battle groups between the United States and Europe. The C-135 operated nonstop from McChord AFB, Wash., or Forbes AFB, Kans., to Germany, usually requiring about 9½ hours eastbound and 11 hours westbound.

(U) A year later General LeMay voiced further optimism. Although admitting that the airlift fleet still consisted largely of reciprocating-engine aircraft, he told Congress that the Air Force was getting more turboprop C-130E's. These planes would serve in MATS' strategic airlift

force until replaced by the C-141. Then they would be assigned to assault roles with TAC and the oversea commands. In joint exercises during 1963 the C-130E had demonstrated its outstanding operational capability in a battlefield environment supporting Army troops.

(U) The C-130E, along with the lower-performance A and B models, would satisfy most Air Force and Army assault troop carrier needs until technology produced a satisfactory vertical or short takeoff and landing (V/STOL) aircraft. Exercise "Big Lift," the transporting of the 2d Armored Division from Fort Hood, Tex., to Germany in October 1963, showed the feasibility of moving large forces by air. But General LeMay warned that it would be very difficult to deploy such a force to an underdeveloped area, or while the landing areas were being harassed by enemy air units. He thought these problems would not be solved until a later date, not clearly predictable.[4]

(U) In February 1964 Secretary McNamara was optimistic but cautious. He told Congress that the United States had just begun to test realistically the potentials of airlift. It had long been assumed that rapid deployment could, to a significant but imprecisely known extent, substitute for additional military forces. In addition, it might become economical to shift even more of the logistical burden from land and water transport to airlift. The critical airlift requirement would occur during the first 30 days of a large-scale limited war in a geographically remote, underdeveloped area. Previously, it had not been necessary to determine precisely the peak deployment needs because U.S.

airlift capacity obviously fell far short of meeting any reasonable goal. By 1968 airlift capability would be about four times the 1961 figure, and the Secretary believed a better estimate of ultimate requirements was now necessary. As a result of a large number of OSD and USAF studies to determine the airlift needed to move various size forces to different goegraphical areas and support them after they arrived, OSD decided that the United States should further increase its deployment capability. The amount of increase would depend on how much prepositioning of materiel in sensitive areas was possible. Prepositioning would have to be greatly expanded in any case, but it could not completely substitute for airlift. The Secretary planned, therefore, to add several C-141 squadrons to the currently programmed force.[5]

Strategic Support of the Army

(U) In the military strategy of 1961-1964, which presupposed a high degree of mobility, a primary function was the movement of ground forces and their equipment and supplies. During the late 1950's the Army and some congressmen complained that in over-emphasizing strategic deterrence the Air Force had neglected its airlift responsibility, especially in support of the ground forces. This complaint resulted chiefly from the small share of defense funds spent on airlift as compared to expenditures for strategic forces. In any case by 1961 OSD, as well as the Army, considered lack of adequate airlift one of the weakest elements of the U.S. military establishment. This criticism pertained especially to preparations for limited war

in remote areas, which would require prompt and possibly large-scale movement of Army units.[6]

(U) The Air Force did not question the desirability of a stronger airlift force, only its priority in relation to the strategic force. By early 1960 it had admitted the necessity of more nearly satisfying the Army's requirement. On 4 March 1960 Generals Thomas D. White and Lyman L. Lemnitzer, Chiefs of Staff of the Air Force and Army, signed an agreement which spelled out the numbers of Army units, troops, and tonnage of supplies that airlift forces would be expected to deploy to various parts of the world within given periods of time. The chiefs agreed that air transport ought to be able to deploy one division anywhere in the world within 7 to 10 days and two divisions anywhere within 30 days.

(U) Officials of both military services admitted that, for several years, the specifications of the White-Lemnitzer agreement could serve only as an objective toward which to work. Edward J. Driscoll, Deputy for Transportation in the Office of the Secretary of the Air Force, estimated in March 1961 that all air transport forces, including Reserve Forces and the CRAF, could probably deploy one division to Southeast Asia in 13 to 14 days. By 1964 they might manage it in 10 to 11 days. The Air Force did not want to use all of the CRAF to deploy forces during a limited war, however, because it would need some CRAF planes to move war materials within the United States.[7]

[redacted] Within little more than a year, the White-Lemnitzer agreement became outmoded as a basis for planning airlift for the Army since airlift

requirements increased more rapidly than capability. For example, the Army planned to increase an airborne division by about 3,500 troops and 15,000 tons while the air tonnage required to support a heavy infantry division appeared about to triple. New logistical standards and procedures would obviously sharply increase the demand for airlift to supply oversea forces. Preparation for fighting in two or more theaters simultaneously also had the same effect.

In July 1962 General LeMay told General Adams, Commander of STRICOM, that, despite the sizeable growth of USAF airlift capacity during the past two years, he had become alarmed by its failure to grow as fast as the demands placed upon it. He said the Air Force still considered the White-Lemnitzer document valid and had used it in airlift contingency planning. But Army planning consistently stipulated weights greater than those set forth in the agreement. LeMay thought he and Adams needed to take a fresh look at airlift objectives and determine what changes were needed. LeMay speculated that new Army thinking about the makeup of a heavy infantry division and modification of the prestockage program might radically change future airlift requirements. At any rate, he considered their review an urgent matter and asked Adams to give it his personal attention.

General Adams assured General LeMay that he was giving this problem close attention but admitted that he had made little progress. He had tried to "cut off the tail of some of the Army columns" and also obtain more airlift. With the C-130E's and C-135's coming into MATS, significant progress had been made in the buildup of strategic airlift. Tactical assault airlift

was giving more trouble. General Adams argued that strategic and tactical airlift would have to be treated as separate forces. Since the battle area might be a long distance from the strategic concentration zone, however, tactical cargo and troop carrier aircraft would have to have approximately the same range as strategic transports. Airdrop capability constituted a basic requirement of all tactical airlift. Airlanding combat forces in the battle area would be more advantageous, but General Adams noted that nothing would make U.S. military forces look worse than arriving over an airport and being unable to land because the field was held by a handful of guerrillas or the runways were blocked. Strategic airlift would not need airdrop capability except in an emergency when it might be called into tactical service.[8]

[redacted] Besides coordinating with the Army, between December 1962 and February 1963 Headquarters USAF and MATS made plans to move Marine Corps units whenever a military situation required it. Earlier, during the Cuban crisis in the fall of 1962, MATS had furnished airlift for a number of Marine units on an emergency basis, although its plans had not provided for such deployment. Gen. William F. McKee, Air Force Vice Chief of Staff, believed that future crises might give rise to numerous situations in which the Marine Corps would need to be moved by air. He proposed that MATS plan for such airlift; otherwise, the Navy or Marine Corps would obtain planes of their own--probably C-130's. This situation, the Air Force believed, would lead to inefficiency and encroachment on the USAF mission. Before the end of February 1963 Headquarters USAF,

MATS, and the Marine Corps had initiated plans whereby MATS would supply airlift for Marine Corps deployment and arrange for Air Force-Marine Corps air-movement training.[9]

(U) Such developments complicated further the USAF problem of fulfilling demands for airlift. In terms of total demand, there was little improvement in 1964. In February General LeMay told Congress that while the Air Force had greatly increased airlift capacity over the past three years, it had not gained in the number of Army units it could transport. Army requirements had continued to go up as each unit wanted to move more equipment and supplies by air than ever before. Although he and General Adams were still trying to reduce the weight and size of units the Air Force would haul, LeMay was not optimistic. "We will never be able to satisfy the customer," he declared. "As soon as we do more, the customer will want more. This is always the case." Not only had the weight of the equipment the Army wanted to move by air increased, but also its size. By 1964 a large percentage of the items were too large for the C-141. This change in Army requirements eventually necessitated procurement of a larger plane.[10]

Battle Zone Support

(U) USAF inability to provide as much airlift as the Army thought it needed, particularly within the theater of operations, gave rise to serious disagreement between the two services over control and execution of the airlift mission in the battle area. The disagreement involved other issues,

such as close air support and reconnaissance, but airlift was a large part of it.*

(S) As early as May 1962 Maj. Gen. David A. Burchinal, Director of Plans, foresaw that, if the Air Force did not change its airlift program substantially, the Army might obtain its own transport planes. OSD had lifted the weight limit on Army organic aircraft and the Army Transportation Corps had asked industry for development proposals. Burchinal warned that the Air Force would have to push development and procurement of aircraft more suitable for operation in remote areas like Southeast Asia or risk losing some of its mission to the Army.[11]

(U) Secretary McNamara gave the Army an opportunity in April 1962 to fully express its dissatisfaction and propose remedies. He directed it to make a study of mobility requirements. The resulting report of an Army board headed by Lt. Gen. Hamilton H. Howze made what the Air Force, and even Secretary McNamara, considered revolutionary proposals. The board recommended two new types of air mobile combat units--air-assault divisions and air-cavalry combat brigades--plus air transport brigades to provide reconnaissance and airlift. As compared to a conventional infantry division, the number of helicopters and fixed-wing aircraft would more than quadruple.

(U) An air transport brigade--one for each air-assault division--would contain 134 aircraft and helicopters, including 80 CV-2A Caribous. This plane could haul about 6,000 pounds of cargo. The brigade's

*For a more comprehensive discussion of this dispute, see George F. Lemmer, Strengthening USAF General Purpose Forces, 1961-1964, (AFCHO, 1966), Ch III.

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aircraft would pick up equipment and supplies that had been delivered to the forward area by the Air Force and distribute them to the ground troops. This would limit the Air Force to "wholesale" distribution while the Army would handle "retail" distribution.[12]

(U) The Air Force believed that acceptance of the Howze Board recommendations would seriously infringe upon the USAF tactical airlift mission. It argued that the board's report failed to assess fully the degree to which the Air Force could contribute to the Army's tactical mobility. The Air Force, and to some degree Secretary McNamara, seriously questioned the need for much of the transport capability to be furnished by the Army air-transport brigades. The Air Force, of course, believed it could furnish what was really required and do it more economically. With new aircraft, plus the substantial improvement of the STOL characteristics of C-123's and C-130's, the Air Force insisted that it could deliver supplies directly to field units.

(U) Despite his conviction that some of the newly-proposed air units could significantly increase the Army's mobility, Secretary McNamara accepted the validity of much of the Air Force's criticism of the Howze proposal. As a consequence, and because everybody agreed that the cost would be very high--possibly $1 billion a year for five years--he decided that the Howze concept should be thoroughly tested before accepting it. Nevertheless, he agreed to a substantial increase in Army aircraft and to creation of an air assault division, both to improve the mobility of existing ground units and to conduct the tests.[13]

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[redacted] In January and February 1964 General LeMay and other members of the Air Staff complained that the Army's air fleet had increased from about 200 planes in 1947, when the Air Force became a separate service, to about 6,000. General LeMay declared that if the Howze Board recommendations were put into effect, the number would rise to approximately 30,000. In February he stated that this growth approached creation of another air force, involving duplication in pilot training, aircraft procurement, and air missions. Army planes were also getting larger and more sophisticated. The Mohawk, an Army reconnaissance aircraft used in South Vietnam, cost about as much as a B-47. General LeMay said he was not opposed to doing the jobs the Army wanted done, although Air Force experience had demonstrated that some of them were impractical, but he argued that the Air Force could do them more efficiently and effectively than the Army. The Air Force objected to the Army's attempt to provide and control all air support over the battle zone.[14]

[redacted] Meanwhile, in August 1963 JCS had approved a STRICOM plan for joint testing of the Army and Air Force methods of improving the Army's tactical mobility. The two services prepared for the test until January 1964 when the Army proposed to exclude Howze concepts. By March, after approval by JCS Chairman Maxwell Taylor and Secretary McNamara, STRICOM excluded testing of the Army plan, at least for the remainder of 1964. The Army, using the experimental 11th Air Assault Division, which had been created for the purpose, conducted its own tests at Fort Benning, Ga. STRICOM, working with the 1st Infantry Division and USAF's Tactical Air

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Warfare Center, created in December 1963, tested Air Force ideas on logistic support and mobility during the summer of 1964 in Indian River I, II, and III at Eglin AFB, Fla., and in November-December 1964 in Goldfire I at Ft. Leonard Wood, Mo.

(S) STRICOM had not reported on the results of its latest test--Goldfire I--at the close of 1964 and it seemed unlikely that OSD would reach a definitive conclusion on the amount of airlift to be furnished by Army aviation and how much by the Air Force before 1966. Other tests scheduled for 1965 would also be thoroughly analyzed. Early unofficial reports implied, however, that the Army remained dissatisfied with Air Force logistic support. The Army criticized the Air Force for not using enough helicopters for close-in support and it continued to believe that the C-130 was impractical for this function. Nor did the Army think air supply by parachute or extraction had been proven effective.

(S) Air Force observers thought the tests had demonstrated that their methods were effective and their theories sound. They discovered, however, that Army and Air Force units did not always work together smoothly. Gen. Howell M. Estes, Jr., Commander of MATS, found that Army troops still did not know how to load transports and USAF crews had to do most of the work that Army loading units were supposed to do. In November 1964 General Estes and General Adams of STRICOM agreed that much more cross training and staffing were needed to make joint operations efficient. USAF officials believed the Fort Benning exercises had revealed a number of weaknesses in the Army mobility concepts, chiefly

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the vulnerability of their aircraft to enemy attacks, the difficulty of field maintenance and low-level navigation, and especially the high cost.[15]

(U) Early reports on the fiscal year 1966 DOD budget indicated that Secretary McNamara would approve only a part of the Army's plan to organize air assault divisions. The Army did not obtain as many men or new helicopters and fixed-wing aircraft as it wanted and its air assault division was temporarily eliminated. Its aviation requirements remained a subject for further study in 1965. In February 1965 Secretary McNamara told Congress that for fiscal year 1966 he proposed an austere Army aircraft program limited to meeting basic requirements. By increasing its aircraft inventory from about 5,600 planes at the end of fiscal year 1961 to more than 8,000 by the end of fiscal year 1966, the Army would remedy its critical air mobility shortages. The Army would not get the Buffalo as a successor to the Caribou, since the Secretary thought the Army was asking for aircraft to accomplish missions that could be carried out by the Air Force.* [16]

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*On 16 June 1965, however, Secretary McNamara announced that he had authorized the Army to organize the 1st Cavalry Division (Airmobile). Formed from the 1st Cavalry Division and the recently abolished 11th Air Assault Division, the new unit would be equipped with 434 aircraft, almost all of which would he helicopters. (DOD News Release No. 404-65, 16 June 65). In November, while touring the combat area in South Vietnam, the Secretary stated that other such units would likely be formed. (Washington Post, 30 Nov 65).

III. ORGANIZATION AND MANAGEMENT OF AIRLIFT

(U) During 1961-1964 the proper organization and management of U.S. airlift was continuously studied within the Air Force, JCS, OSD, and Congress. The subjects examined and debated during the period included: (1) status of the long-range airlift organization (largely MATS); (2) proper control and operation of tactical, or assault airlift, as distinguished from strategic or intertheater; and (3) the practicability of consolidating all air transport under one organization. When the degree of emphasis the Kennedy administration was placing on mobility of conventional military forces became clearly understood and when it was realized how inadequate airlift resources actually were, the Department of Defense and some other governmental agencies gave close attention to these problems. A rapid increase in airlift forces received first priority, but it was equally important to get the most service out of what was available. Consequently, efficient management received a high priority.

(U) While the emergency buildup rendered the shortage of airlift somewhat less critical than it had been in 1961, OSD continued to stress cost control and cost reduction programs. The administration's determination to strengthen U.S. defenses, the recurring world crises, and the high cost of new weapon system and space programs, all conspired to place

a premium on getting the greatest possible return from each dollar spent. The alarming unfavorable balance of U.S. gold payments during these years added urgency to the demand for efficiency.[1]

Evolution and Expansion of MATS

(U) MATS was created in June 1948 by the consolidation of the USAF Air Transport Command and the Naval Air Transport Service in order to handle strategic airlift for the Department of Defense. A major USAF command as well as a DOD agency, MATS was responsible for the air transportation of people, materiel, strategic materials, and other cargo. Excluded from its mission was responsibility for tactical air transport of airborne troops and their equipment and for initial supply and resupply of units in forward combat areas. USAF agencies supplied the bulk of the support to MATS, while the Navy continued to operate some transport squadrons.[2]

[redacted] During the mid-1950's there was vigorous discussion of a single airlift command operating under an industrial fund.* In December 1956, on the recommendation of the Air Force, OSD directed integration into a single DOD agency all transport aircraft engaged in point-to-point service, aircraft likely to be so scheduled, and other transports as selected by OSD. The Air Force (Secretary of the Air Force and Commander of MATS) was designated executive agent. This single manager concept was launched in 1958 and operation under industrial funding began in 1959. In 1957 and 1958 ten TAC heavy troop carrier squadrons and two bases, a PACAF troop carrier wing in Japan, and a third Naval Air Transport squadron

*When operating under an industrial fund, an agency received payment for its services and used the proceeds to finance its operations.

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were transferred to MATS. In June 1960 OSD approved an Air Force program for carrying out the OSD and Presidential policy for developing a wartime airlift capability. This program included modernization of MATS, greater emphasis on its military mission, and diversion of a great part of its peacetime airlift to commercial carriers.[3]

In March 1960 Congress had appointed a special subcommittee headed by Representative L. Mendel Rivers to conduct an inquiry into the adequacy of national airlift. This subcommittee's report recommended that strong impetus be given the USAF efforts to modernize airlift forces. Congress then voted funds for immediate procurement of new C-130E's and C-135's and indorsed development of a new cargo aircraft designed specifically for military airlift.

During the early 1960's the growing likelihood of limited war as an alternative to general war greatly increased airlift requirements, placing greater emphasis on joint Army-Air Force assault airlift training. In January 1960 Headquarters USAF directed TAC to develop and test contingency war plans for the use of airlift in supporting the Army. TAC and MATS worked out a modus operandi for cooperation in this effort with TAC being made responsible for overall planning. A series of exercises with MATS, TAC, and Army participation, conducted between February 1961 and December 1964, enabled the Army and Air Force to improve efficiency and cohesion in field forces.[4]

During 1960-1964 a series of international crises taxed USAF airlift capabilities around the world. The Congo crisis of 1960 required the transfer to Europe of 4 MATS C-124 squadrons with a peak of 59 aircraft to

augment the available USAFE force of 45 C-130's and 46 C-119's. One rotational squadron of MATS C-124's remained in the theater. In addition, in 1961 a TAC troop carrier squadron began rotational assignment to USAFE and 32 TAC C-130's rotated to USAFE in support of a two-week Army-Air Force exercise. The Chinese invasion of India during the Cuban crisis in October-November 1962 required JCS to use 12 USAFE C-130's to support the airlift to India and send a MATS squadron of C-124's to fill the gap.

For several years the Pacific area was a crucial center of the cold war. During the Laotian crisis of May-December 1961, the Pacific Air Forces (PACAF) positioned a significant portion of its airlift at Clark AB, the Philippines, where it could have been operational in Thailand or Laos in a matter of hours. Twice during 1961 TAC responded to PACAF calls for airlift by dispatching C-130 squadrons to the area. MATS, too, got ready to support military operations in the Pacific, and with JCS approval it moved 28 aircraft there, basing them in Japan, Okinawa, and at Clark. Their mission was to move PACAF mobile strike forces into Southeast Asia if necessary.

Airlift in support of operations in Vietnam was furnished by TAC rotational squadrons and PACAF's 315th Air Division, which included MATS planes. In November 1961 MATS moved Detachment 2, an element of the 4400th Combat Crew Training Squadron (Jungle Jim) from Eglin AFB, Fla., to South Vietnam. PACAF's 315th Air Division flew the planes to resupply all of the U.S. military units in Southeast Asia. PACAF's 2d

ADVON (later designated 2d Air Division), under operational control of the U. S. Military Assistance Command, Vietnam (USMAC/V), used the three squadrons of C-123's obtained from TAC in mid-1963 to support USMAC/V and South Vietnam forces.* [5]

Consolidation of Airlift

(U) In June 1962 Congressman Rivers introduced a bill in the House of Representatives proposing redesignation of MATS as the Military Airlift Command, establishing it as a specified command of the JCS, and consolidating all strategic airlift resources in the organization. The Air Force opposed the redesignation as expensive and inconvenient and the establishment of a JCS command because it offered no apparent advantage over the existing single-manager arrangement. The Air Force did accept some consolidation, at least in theory. In November, pursuant to OSD approval, General LeMay decided that: (1) the current organization would be retained; (2) all four-engine planes except assault (tactical) and command support aircraft would be consolidated in MATS; (3) logistic support squadrons of AFLC would be transferred to MATS; (4) the mobilization assignment of AFRes C-124 units would be changed from TAC to MATS; (5) a proper balance would be maintained between TAC and MATS; (6) the term "assault airlift" would be substituted for "tactical airlift;" (7) TAC would program, furnish, and train assault units; and (8) an adequate force would be established in TAC to carry out the assault mission in cooperation with the Army.[6]

*For a discussion of USAF deployment, see Jacob Van Staaveren, USAF Plans and Policies in South Vietnam, 1961-1963 (AFCHO, 1965) pp 18-19.

(U) The Air Force and STRICOM studied consolidation of airlift for more than a year. Pressure from the Rivers subcommittee, realization that there was much sentiment in OSD for centralization, and the growing similarity of the major transport aircraft encouraged the Air Staff to take some kind of initiative. Between January and April 1962 Headquarters USAF looked with some favor on an Air University proposal to consolidate all airlift forces within a major USAF command. This would have provided a system of centralized control in all kinds of war.

(U) General Sweeney of TAC and General Adams of STRICOM strongly opposed this plan, however, arguing that airlift was not entirely an Air Force problem and had to be organized to provide effective support for all the unified commands. General Sweeney declared that if airlift had to be reorganized, he would prefer a unified command to an Air Force command. He thought an airlift command, entirely within the Air Force, would be a step backwards, for it would encourage the Army and Navy to create airlift organizations of their own, disrupting MATS, TAC, and STRICOM. General Adams was happy with the current arrangement. He believed assault airlift had to operate under a tactical air force in the combat zone and under a tactical air force commander. Consequently, responsibility for providing assault airlift should rest with TAC, which trained its forces to work with the Army. In any case, General Sweeney declared, the Air Force could not pull units out of STRICOM without a JCS battle which the Air Force would probably lose.

(U) General Sweeney proposed concentrating logistical functions in MATS and combat functions in TAC under STRICOM. All airlift could be used by MATS for initial mass deployments. Subsequently, MATS would perform the resupply mission and TAC aircraft would handle the combat airlift function. The Air Force ought to immediately determine how much airlift was needed for logistics and how much for the combat mission. He thought TAC should have the seven C-130E squadrons currently programmed for MATS.[7]

Meanwhile, OSD conducted intensive studies of airlift organization and management. Deputy Secretary of Defense Roswell L. Gilpatric believed that the introduction of new, high-performance aircraft into the transport inventory, and the planned introduction of more advanced models, raised important questions concerning the adequacy of current organizational arrangements. In February 1963 he established a study group, composed of representatives of OSD, JCS, and the military services, to analyze alternatives. The group's report, circulated on 2 March 1964, was primarily a compendium of diverse opinions on the advantages and disadvantages of integrating all, or various combinations of, the military airlift units into a single airlift command. Most of the analyses were heavily weighed in favor of integrating airlift units, particularly those of MATS and TAC, into a single organization. The report implied that MATS and TAC were, or soon would be, equipped with similar aircraft and therefore had similar and duplicating missions. In short, the versatility of aircraft was used to support the argument that there was no significant

difference between MATS and TAC airlift. At the same time the dissimilarity of Army (Caribou) and TAC (C-130) aircraft was cited as an argument against integrating them into a single theater airlift organization, even though they had the same mission.[8]

(U) The Air Force, having reassessed its position since early 1962, opposed integration of MATS and TAC airlift or any fundamental change in the status of MATS. It believed MATS and TAC had basically different missions and capabilities. The fact that each could augment the other's efforts because of the versatility of their planes in no way supported the arguments that their missions were the same. MATS had the long-haul, intertheater deployment and supply missions, while TAC had the intratheater air assault and logistic support missions--moving troops, equipment, and supplies into the combat zone.

(U) Some USAF officials admitted, however, that the Air Force weakened its case by justifying TAC requirements in terms of the number of planes needed for deployment rather than the number needed to support air and ground forces in combat operations. As the number of C-130's in TAC increased, the duplication would grow more apparent. Contingency planning that depicted TAC and MATS planes simultaneously deploying troops and equipment over the same routes could only cause increased pressure for a single airlift organization.

(U) Secretary Zuckert agreed with the Air Staff's contention that similarity of models of transport aircraft had not blurred the distinctions between strategic, intertheater airlift by MATS and assault airlift

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controlled by TAC. Contrary to what appeared to have been a basic assumption of the OSD study, he thought the similarities in types of airlift equipment might not last out the decade. Strategic airlift in the future would be the job of massive freight carriers, supersonic transports, or aircraft having both characteristics. Theater air transports would probably be of the V/STOL variety.

(U) Even in 1964, despite similarity of planes, the modes of operation of the two types of airlift were quite different. The nature of strategic deployments and logistical missions made them uniquely subject to centralized control from the United States, operating to, through, and from all theaters under JCS direction. To carry out this global responsibility, MATS had long maintained a worldwide system of command, control, and communications. TAC furnished assault airlift for STRICOM in the United States and for unified commanders overseas. The peculiar nature of theater airlift required landing on semi-prepared fields, the air-dropping of equipment, and other specialized techniques. A theater assault squadron, even if equipped with C-130E's, did not possess strategic airlift capability in the true sense of the term. TAC planes would act in a strategic capacity only on the initial, large-scale deployment, when they would be supplementing MATS and operating under its control.[9]

(U) Despite rather strong sentiment on the part of Deputy Secretary of Defense Gilpatric and Comptroller Charles J. Hitch for the unification of MATS and TAC airlift units, the Air Force and STRICOM won their point, at least temporarily. In February 1964 the Joint Staff decided

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that the existing arrangement of MATS, with the Secretary of the Air Force as single manager, was better than any practicable alternative. In March JCS reached the same conclusion. The Joint Chiefs believed that the existing arrangement provided a sound framework, subject to modification, to cope with changing circumstances. Consolidation based on the versatility of certain MATS and TAC aircraft was considered unsound.

(U) Although Secretary McNamara had not yet reached a decision, the Air Force believed that MATS would continue to supply the strategic intertheater airlift and TAC the intratheater assault airlift.* As MATS obtained substantial numbers of the new C-141, TAC would get more C-130E's. General Estes, MATS commander, insisted, nevertheless, that MATS would need to keep some C-130's for hauling loads that were too light to justify the use of the C-141.[10]

(U) Although it rejected consolidation of MATS and TAC airlift forces, the Air Force granted that there was a need to eliminate duplication in oversea theaters, provide a central point for strategic airlift information, and review the assignment of airlift resources between TAC and MATS. In July 1964 Headquarters USAF decided that MATS would control all transport aircraft committed to deployment operations, including TAC planes when used for strategic, intertheater airlift. The Air Force also recognized that JCS and OSD had to have airlift information immediately available to them, and it set up in the USAF Command Post a central point

*On 5 May 1965 the House of Representatives passed a bill changing the name of MATS, effective 1 January 1966, to the "Military Airlift Command," but there was as yet no indication that it would become a JCS specified command.

for collecting and disseminating all data on airlift. To refute the charge that it was scheduled to receive too many C-130E's, TAC made a new study of intratheater airlift requirements. Completed in September 1964, this investigation concluded that, through 1969, TAC's requirements far exceeded its programmed forces.

(U) Because of Secretary McNamara's insistence on reducing manpower overseas and cutting down the outward gold flow, the Air Force consolidated certain airlift functions in Europe and re-examined such possibilities in the Pacific. Beginning in April 1964 USAFE's 322d Air Division was assigned to MATS and the 1602d Air Transport Wing of MATS was abolished. MATS extended its intertheater routes to provide USAFE with an intratheater air logistics service. In July USAFE's three squadrons of C-130's were reassigned to TAC and returned to the United States. The assault transport force located in Europe at the end of 1964 consisted of two TAC rotational C-130 squadrons and one MATS rotational C-124 squadron. While on rotation, these units were attached to the 322d Air Division but remained under operational control of USAFE. All airlift units in Europe operated under USAFE control for: (1) nonscheduled intratheater airlift; (2) joint training and exercises; and (3) functions related to these two.[11]

(U) USAF studies begun about March 1964 indicated that a similar consolidation in the Pacific was neither feasible nor desirable. Because of the tremendous distances, the widely dispersed islands of U.S. military strength, the large number of danger points, and the lack of any power but the United States to protect Free World interests, the Pacific

theater needed its own airlift organization. MATS and TAC came to the same conclusion after restudying the situation in August and September, but some minor functional consolidation did take place. MATS would do all C-124 heavy maintenance at Hickam AFB, Hawaii; PACAF would concentrate all C-130 heavy maintenance on Okinawa. MATS turn-around maintenance would be concentrated at Tachikawa, Japan, and its 1503d Transport Wing was reduced to a group. MATS extended its intertheater routes to Marcus Island, Iwo Jima, and Korea to take some of the burden off PACAF, which was finding its resources stretched to the limit by the conflict in Vietnam.

(U) Concurrently, MATS, TAC, and USAFE studied the European consolidation to determine how it was working. In July 1964 they reported differing conclusions. According to MATS and USAFE, the new system was working well and they did not think it would fail even during emergencies. TAC, on the other hand, believed the system might break down in emergency or war because a single commander would not be able to manage both intertheater and intratheater airlifts. TAC recommended returning the 322d Air Division to USAFE. Headquarters USAF concluded that no valid assessment could be made until the system had been in operation for a year and it directed the commands to make a new review in April 1965.[12]

IV. A LOOK AHEAD

(U) On 19 October 1964 MATS received its first C-141, the plane long counted on to replace most of the C-118's and C-124's. It was the first all-jet aircraft designed from the start as a cargo plane. President Kennedy had announced award of a contract to Lockheed Aircraft Corporation on 28 March 1961 and assembly began in June 1962. The plane made its first flight at Dobbins AFB, Ga., on 17 December 1963 and its first transcontinental flight--to Edwards AFB, Calif.--on 15 June 1964. The first squadron of C-141's was activated at Travis AFB, Calif., on 23 April 1965 and the Air Force planned to have five squadrons in operation before the end of 1966.

(U) Designed for easy maintenance, efficient loading, and relatively short landing and takeoff, the C-141 could carry 70,000 pounds of cargo or 154 troops at more than 500 miles per hour. It could haul 63,000 pounds of cargo nearly 4,000 miles without refueling; at reduced speed and payload, its range exceeded 5,200 miles. Equipped with the most advanced instrumentation for all-weather navigation and communication, this transport aircraft would be able to use more than 1,850 airports around the world. On 18 February 1965 Secretary McNamara told the House Armed Services Committee that 145 C-141's had been placed on order with fiscal year 1965 money, $400 million more would be spent on the plane in

fiscal year 1966, and a final quantity would be bought in fiscal year 1967. There remained some uncertainty as to just what the final "buy" would be.[1]

The C-5A

(U) Although the C-141 would satisfy most of the requirements of the DOD airlift program by 1970, it still could not meet all of the demands of a truly mobile strategy. Well before the end of 1963 the Air Force recognized that it would need a plane to haul larger items than would fit into the C-141. Only the C-133 "Cargomaster," and to a limited extent the C-124, could haul "outsize" pieces of cargo--aircraft wings, radar sets, ICBM's, communication vans, and large Army vehicles. These planes were getting old and, in addition, the C-133 had always been a difficult and expensive aircraft to keep in flying condition.

(U) As studies progressed, the Air Force, and eventually OSD, became convinced that a massive cargo plane would not only be extremely useful for hauling outsize items but would also furnish the most economical means of transporting large numbers of men and their supplies to far distant points. What emerged from a series of studies in 1963 and 1964 was a program for development and purchase of the largest aircraft in the West and the largest all-jet plane in the world.* First called the CX-4, then the CX-HLS (Heavy Logistic System), it was finally designated the C-5A.[2]

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*The Soviet AN-22, unveiled at the Paris international air show on 15 June 1965, supposedly can carry 720 passengers or 80 tons of cargo, but it is of turboprop design. (See New York Times, 16 June 1965.)

(U) As early as July 1963 the Air Force proposed an airlift program that included development of the CX-4, but only as a replacement for the C-133. At this time there had been no detailed study of the plane's relationship to total transport needs, and OSD criticized the Air Force for not coming up with a better integrated and more clearly thought-out program. The Director of Defense Research and Engineering (DDR&E) agreed that the Air Force should proceed with studies to substantiate the need for the heavy transport but it thought the investigation should result in a proposed force structure which included the C-130 and C-141 as well.

(S) A thorough study of Army-Air Force airlift needs, DDR&E believed, might reveal numerous uses for the CX-4. In addition, there ought to be further consideration of the plane's size. And this work needed to be done quickly, for development would have to start in early fiscal year 1965 at the latest to get the plane by 1969, as the Air Force requested.[3]

(S) By August 1963 JCS had concluded that the military services needed a heavy cargo transport such as the CX-4. JCS deliberation postulated a crisis that required getting a force of 65,865 men and 148,595 tons of cargo to Thailand in 30 days. A composite air strike force (CASF) would have to be there in three to four days and one-third of the Army force within seven to nine days. Under every alternative examined, a CX-4 type of aircraft was required to meet the time limits. JCS found that much Army equipment would be too large to haul in any aircraft but the C-124 and C-133, and most of these aircraft would be out of the inventory before 1970. Approximately 38 percent of the equipment would

be too large for the C-141 and 50 percent for the C-130. The CX-4 could carry it all.[4]

(U) In February 1964 General LeMay urged on Congress the necessity for the giant cargo plane, now generally referred to as CX-HLS. Secretary McNamara also stated that it would probably have to be developed. If not, U.S. military airlift capability would be limited pretty much to the C-130 and the C-141 by the end of the decade. The ability to move outsize items would not of itself justify the expense of developing the plane, but Air Force and OSD studies had shown that it would be economical to operate a very large aircraft to haul most types of military cargo. In deploying Army forces, such a plane could carry about three times as much cargo as a C-141 but cost only about 50 percent more to operate.

(U) Secretary McNamara authorized the Air Force and the Weapons Systems Evaluation Group (WSEG) to undertake new studies and compare their findings with proposals of aircraft manufacturers. He released about $10 million of fiscal year 1964 funds and $7 million from the fiscal year 1965 budget to conduct these investigations. General LeMay, who was much surer than the Secretary of the necessity for the plane, thought this funding adequate.[5]

(U) In February 1964 Representative Gerald R. Ford of Michigan asked if the new plane would not duplicate the mission of the C-141. General LeMay replied that they complemented one another. But there was some substance to Representative Ford's implied criticism. In

1960, when the C-141 was being designed, some people in MATS thought it should have been made larger. Asked why it had not been designed to handle outsize items, LeMay declared that the passage of time had changed strategy. The C-141 was the best "coordinated" plane ever built, since everyone had agreed on its specifications. After 1961, however, the Army had decided to move much more of its large equipment by air. General LeMay insisted that the Army's changed requirements had made the CX-HLS necessary.[6]

(U) In October 1964 Lt. Gen. James Ferguson, USAF Deputy Chief of Staff for Research and Development, announced that the Air Force had recently signed study contracts for the CX-HLS with Boeing, Douglas, and Lockheed, and for its engines with General Electric and Pratt and Whitney. Special studies were under way in advanced propulsion and high flotation landing gear. The Air Force envisioned an aircraft with a cargo compartment 100 to 120 feet long, 17 to 19 feet wide, and 13 to 14 feet high. The plane would have a range of at least 5,500 nautical miles, carrying a load of 500 to 700 men, or over 100,000 pounds of cargo. Maximum gross weight would be 600,000 to 725,000 pounds. The plane would have four or more engines. Six TF-33 engines (the C-141 had four) would supply enough power, but the Air Force hoped to develop an engine with higher thrust-to-weight ratio, so that it would have to use only four. The plane's landing gear--called high flotation--would probably have 24 or more wheels, enabling it to use relatively crude landing strips and deliver equipment and supplies close to combat areas.[7]

[redacted] On 9 November 1964 Secretary McNamara recommended to the President that the CX-HLS, now called the C-5A, be developed, that three squadrons be procured, and that the previous C-141 program of 20 squadrons be cut back to 13. Although not pleased by the large reduction in C-141's, the Air Force concurred. Both Secretary Zuckert and General LeMay agreed with McNamara that eventually there probably would be a need for more than three squadrons. The Army and Air Force asked for six.[8]

(U) In February 1965 Secretary McNamara announced that the aircraft would be powered by four newly developed engines and that its gross weight would approach the maximum 725,000 pounds. He said that full-scale development would begin about 1 July 1965 and that the Air Force hoped to have it operating by 1969. One C-5A was expected to do the work of three to five C-141's in deploying typical Army units. Its fuselage would be wide enough to load two columns of Army vehicles side by side, whereas the C-141 could take only one column. This would greatly increase efficiency in hauling bulky items and permit the C-141 to carry denser cargo, adding to its efficiency as well. Thus, a mixed force of C-141's and C-5A's would make the most efficient use of both. The C-5A would be very expensive. Including development, procurement, and operation for 10 years, Secretary McNamara estimated the cost at about $2.2 billion for the three squadrons. But it would still be a better bargain than buying additional C-141's, thus the reason for reducing the C-141 program by about one-third and substituting C-5A's.[9]

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V/STOL Transports

(U) Since World War II the Air Force has been interested in developing vertical or short takeoff and landing (V/STOL) aircraft. This interest was stimulated both by the need for penetration and dispersal in remote combat areas and by the rapid improvement of helicopters. Beginning in January 1955 the three services worked with such aircraft companies as Ryan, Bell, and McDonnell, and with foreign countries--Canada, Britain, France, and West Germany--to develop V/STOL aircraft possessing military potential. In March 1958 the Air Force published a requirement for a V/STOL tactical fighter and shortly thereafter the Navy joined the project. Although at least two V/STOL planes, sometimes called vertijets, flew before 1960, and the Army had stated a requirement for a STOL aircraft, progress was slow because of lack of funds and failure to develop suitable engines. In 1960 OSD established a tri-service program aimed toward development of better engines and advancement of the general state of the art. By July 1963 work was proceeding on at least four experimental projects, one of which--the XC-142A--looked toward development of an intratheater assault transport. In addition, U.S. support of programs in Western Europe continued.[10]

[redacted] Between August 1960 and January 1962, as the Army became more insistent in its demands for an intratheater logistic aircraft, and JCS agreed that a requirement existed, OSD asked for thorough examination of the problems involved in V/STOL, particularly as applied to airlift. In its Report No. 48 of August 1960, the Weapons Systems Evaluation Group

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noted a dangerous shortage of long-runway airfields in underdeveloped parts of the world. Few could accommodate the current models of USAF tactical and cargo aircraft. In August 1961 WSEG's Report No. 54 concluded that the capabilities of an advanced fighter, such as the proposed TFX, could not be fully realized without support from a STOL transport. WSEG pointed out that the only modern transports with reasonable effectiveness as intratheater logistic carriers were the various models of the C-130. Since these did not meet all requirements, and the programmed C-141 could not be classed as a STOL aircraft, WSEG recommended that $40 million be put in the fiscal year 1964 budget to start developments in the field.[11]

(S) OSD refused to approve an Air Force proposal to develop a short-range intratheater aircraft, but in early January 1962 DDR&E decided that there needed to be a thorough and broad-gauged study on the subject. It wanted an analysis of requirements, the capability of current or contemplated aircraft to meet them, and the feasibility of having one type of aircraft to meet needs of the Army, Air Force, and Marine Corps. It wanted the study to examine the capabilities of the C-130, the CV-2 Caribou, and the proposed tri-service VTOL. On 30 January 1962 JCS assigned the study to WSEG.[12]

(S) WSEG Report No. 64, "Transport Aircraft for Intratheater Airlift Missions, 1962-1969 Time Period," published on 15 October 1962, concluded that a V/STOL transport would fill the principal remaining gap in limited war air requirements. This logistical aircraft would have to

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be capable of operating from short, crudely-prepared fields and aircraft carriers and of carrying a substantial payload up to 1,000 miles. The plane, WSEG said, ought to be able to land or take off over a 50-foot obstacle within 1,000 feet. Possession of such a plane would permit air access to within a short distance of any part of the world.*

[redacted] This V/STOL aircraft would need the following capabilities: (1) range, 2,000 n.m.; (2) ferry range, 3,500 n.m.; (3) operating radius, 500 to 1,000 n.m.; (4) payload, up to 30,000 lbs; (5) cargo compartment, 10x9x38 feet; and (6) speed, 300 to 400 knots. No current or programmed U.S. aircraft could meet these specifications. Only by using a combination of aircraft and helicopters, some of them inefficiently, could U.S. military forces meet their major air logistical demands. Helicopters, the only VTOL craft, were severely limited by short operational radii, small payload, low speed, high expense, and vulnerability to enemy action. Very expensive modifications of current aircraft could fill only part of the requirement and might take nearly as long as developing a new aircraft. WSEG believed that the United States could develop an effective V/STOL by 1969 at a cost of about $3.5 million per aircraft--if it bought 500 or more.[13]

[redacted] As an alternative, WSEG proposed the building of a V/STOL in two stages: (1) a STOL vectored-slipstream type at a flyaway cost of about $2.6 million per aircraft; and (2) a tilt-wing V/STOL, essentially

*For example, in West Germany the terrain is such that a V/STOL transport could land within 12 miles of any point in the country. Also, within 25 miles of any point in the Congo, 25 miles of any point in South Vietnam, 60 miles of any point in Thailand, 75 miles of any point in Pakistan.

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a growth version of the STOL. With an early decision, the STOL plane could probably be made available by 1967. WSEG also suggested a third V/STOL plane for Navy and Marine Corps amphibious forces that would be flown from carriers. It acknowledged that, even with V/STOL transports, helicopters would be needed to complete aerial lines of communication.[14]

Operating off short, crudely-prepared fields,* intratheater airlift could permit establishment of forward supply dumps for even small ground-force units in the combat area. The tactical movement of a battalion or company-size task force would be easier and, in small actions, V/STOL aircraft could sometimes provide the entire line of communication. In time, the whole concept of employing airborne forces would change since large parachute units would no longer be necessary. This would save manpower, training costs, and equipment. It would avoid the time-consuming preparation of equipment for airdropping and the substantial loss of, and damage to, equipment that occurred during airdrops. It would also permit combat-loaded vehicles to be landed. In parachute drops, vehicles were landed empty. Although airlanding might require more time than a parachute operation, units that arrived by aircraft would be more compact, better organized, and readier for combat. Their sustaining power would be greater because heavy weapons would be quickly available.[15]

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*Intratheater airlift could also use aircraft carriers, transporting cargo from main bases to carriers or to Marine amphibious forces ashore. This cargo would consist of critical items, such as replacement jet engines, spare parts, nuclear weapons, and other items that were difficult or expensive to stockpile.

After considering the WSEG report, J-5 concluded in May 1963 that a requirement existed for a 10-ton V/STOL assault transport, the Air Force ought to be directed to begin development, and the three services should expedite improvements in current intratheater transports. Subsequently, JCS considered the WSEG paper but could not reach agreement. The Army, Navy, and Marine Corps opposed developing a new large STOL or V/STOL transport until additional data was obtained on technological difficulties which might preclude military application of such aircraft. They thought it might prove economically impractical to combine STOL and V/STOL capabilities in one aircraft. Until results of the research became available, it would not be possible to compare the cost and effectiveness of large transports with other cargo aircraft and helicopters.

The Air Force believed that the WSEG analysis fully supported the requirement, previously agreed to by JCS, for an 8- to 10-ton V/STOL transport. Furthermore, WSEG had demonstrated that development was feasible and that a program should be started at once. If begun immediately, the Air Force contended, program definition and subsequent development of prototypes would progress at the proper time to take full advantage of foreign and domestic test programs. This procedure would obtain operational aircraft at the earliest practicable date.[16]

Although in mid-1963 Secretary McNamara disapproved another Air Force proposal for developing the V/STOL transport (designated the CX-6), he encouraged efforts to define a program that would lead ultimately

to successful development. By the end of 1963 the services had invested a total of about $225 million in foreign and domestic V/STOL programs and, at the beginning of 1964, McNamara approved an additional $5 million for Air Force investigations during fiscal year 1965. In February 1964 General LeMay told the House Subcommittee on Appropriations that the state of the art had just begun to promise a militarily useful V/STOL. Asked if the Air Force could have it in 10 years, he answered, "I would think so, yes."[17]

(U) In October 1964 General Ferguson indicated that the Air Force would first develop a V/STOL utility plane for search and rescue work in special air warfare. Although the major V/STOL effort would likely be bent toward obtaining a fighter, the CX-6 program would look toward development of an advanced assault transport. He insisted that any new V/STOL plane should be a potential operational weapon system capable of growth to higher performance.[18]

(U) The experimental V/STOL that seemed most nearly related to intra-theater logistical missions was the tilt-wing XC-142A being developed by Ling-Temco-Vought. Powered by four turboprop engines, it could carry 17,000 pounds as a STOL aircraft and 8,000 pounds as a V/STOL. It was expected to attain a speed of 430 miles per hour and a ceiling of 29,000 feet. The Air Force let the contract for this plane in the spring of 1962. It made its first conventional flight in July 1964 and its first hover flight in March 1965. Although the XC-142A was a landmark in aviation history and had significant military capability, neither this aircraft

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nor any of the foreign models clearly demonstrated the capacity to grow into the 8- to 10-ton assault transport the Air Force was looking for.[19]

(U) Complete success of any V/STOL operation would depend on quick site preparation. As General Ferguson explained in October 1964, V/STOL operations from unprepared sites would be severely hampered by stones, sand, dirt and other debris kicked up by the air blast. These could damage the engines and aircraft structure and blind the pilot. At the end of 1964 the Air Force was investigating a plastic-resin material for rapid cover of landing sites. An aircraft could drop or spray this semi-liquid material on a field in a combat area. Within a few minutes it would be hard and strong enough to land on. Air Force tests had shown that a pad of this plastic material 3/16 to 1/4 inches thick, after drying for 15 minutes, could withstand pressures of 25,000 pounds per square foot and temperatures of 1,000° to 3,000°F.[20]

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V. THE ACHIEVEMENT

(U) Although the Air Force was never entirely satisfied with the speed of buildup over the period 1961-1964, especially in planes for assault airlift, the achievement in overall growth of airlift capacity during these years was unprecedented, except for periods of war. In December 1964 Secretary McNamara estimated that between 1961 and 1964 the United States had increased its capacity to airlift military forces by 100 percent. He further stated that in 1970, when 13 squadrons of C-141's and three squadrons of C-5A's would be operational, the increase in capacity over 1961 would approximate 600 percent. By increasing mobility, this growth went far toward achieving an objective of the late President Kennedy's strategy of flexible response--more military power with smaller forces by greatly shortening the time needed to apply that power.

(U) At the beginning of 1961, U.S. long-range airlift capability was far short of any reasonable requirement, largely because a high percentage of MATS transports had reached or were approaching obsolescence. In addition, TAC could not get enough planes to provide adequate assault airlift. By the end of 1964 the weaknesses had by no means been entirely corrected, but plans had been adopted and production was under way to correct most of them. Replacing the C-118's, C-121's, C-124's,

and other aging planes in the regular Air Force with C-141's would vastly increase the airlift capacity of MATS. In addition, it would permit TAC to obtain C-130's and the AFRes to get rid of its C-119's and get better aircraft. Most C-123's would be transferred to special air warfare forces, where they could be most useful. The ANG, over a period of several years, would be able to replace its C-121's and C-97's with C-124's, old but still quite useful.

(U) One OSD recommendation aroused misgivings in Headquarters USAF. Secretary McNamara viewed the approximately 880 transports being operated by the ANG and the AFRes as of little utility except as troop carriers in the Western Hemisphere. Since by the end of 1964 he had come to believe they were hardly worth their cost, he proposed to eliminate more than half of them by 1971 and apply the money saved to the cost of the C-5A. The Air Force viewed such a drastic cut as dangerous. Not only did the Reserve Forces provide much of the airlift for combat exercises with the Army, but they also furnished valuable support to MATS during such emergencies as the Berlin and Cuban crises of 1961 and 1962 and the growing conflict in Southeast Asia.

(U) At the end of 1964 it was impossible to foresee the significance of the changes of the past four years, since the remaining years of the decade would undoubtedly see substantial alterations in the military situation. Technological developments alone would likely bring about many changes in requirements for airlift. If the predictions of Secretary Zuckert and

General LeMay were reasonably accurate, another decade would witness the advent of massive logistical carriers and V/STOL transports with accompanying operational changes that might transform the whole nature of conventional warfare.[1]

NOTES

Unless otherwise noted, all primary sources cited (letters, memos, special studies, JCS papers, etc.) are located in Headquarters USAF Directorate of Plans file RL (61), (62), (63), or (64) 77-2, depending on the year of the source.

CHAPTER I

1. President John F. Kennedy's Defense Message, 28 Mar 61; N.Y. Times, 29 Mar 61; N.Y. Times, 27 Mar 64; Statement of SOD Robert S. McNamara before House Armed Services Cmte on FY 1966-1970 Defense Program and 1966 Budget, 18 Feb 65, pp 115-118 (cy in AFCHO files).

2. Hist (TS), D/Plans, Jul-Dec 61, pp 75-76; House Hearings before Subcmte on Approp, 88th Cong, 1st Sess, DOD Appropriations for 1964, pt 1, pp 153-56, 421.

3. Ltr (U), Col Gerald M. McNulty, Aerospace Policy Div, DCS/P&P, to ASAF(M), 9 Mar 61, subj: Mission of Air Transport Units, OSAF file 51-61; Airlift Study (U) by Edward J. Driscoll, Dep for Trans & Comm, OSAF, 15 Mar 61, OSAF file 731-61.

4. Hist (TS), D/Plans, Jan-Jun 61, pp 56-61.

5. DOD Annual Report, FY 1961, p 296; Monthly Aircraft/Missile Digest (S), USAF Cargo Planes, Jun 60, Jun 61; Air Force and Space Digest, Sep 63, pp 200-203.

6. House Hearings before Subcmte on Approp, 87th Cong, 1st Sess, DOD Appropriations for 1962, Pt 3, pp 18-19, 399-400. (Hearings of this subcommittee that were used in this study also took place during the 87th Congress, 2d Session and are entitled DOD Appropriations for 1963; 88th Congress, 1st Session, DOD Appropriations for 1964; and the 88th Congress, 2d Session, DOD Appropriations for 1965. References to these hearings will be cited hereinafter as Hearings for _____, _____ Cong, _____ Sess.) See also Charles H. Hildreth, USAF Logistic Preparations for Limited War, 1958-1961, (AFCHO, Oct 1962) pp 52-53.

7. Hist (TS), D/Plans, Jul-Dec 61, pp 75-76; Hearings for 1963, 87th Cong, 2d Sess, Pt 2, pp 105-107, 463, 518-19; Hearings for 1964, 88th Cong, 1st Sess, Pt 1, p 421.

8. Hearings for 1963, 87th Cong, 2d Sess, Pt 2, pp 105-107, 463, 518-19.

9. Memo (U), SOD Robert S. McNamara to SAF Eugene M. Zuckert, 8 Feb 62, w/enclosed study, "Strategic Lift Capability for Limited War."

10. Ibid.

11. Memo(S), Maj Gen Fred M. Dean, D/Ops, Joint Staff, to D/Ops, USAF, 9 Mar 62, subj: Actions to Improve Airlift Capability; ltr (S), Col John W. Chapman, D/Plans, to D/Ops, 4 Apr 62, w/2 atch, subj: Airlift Capabilities Studies.

12. Hearings for 1964, 88th Cong, 1st Sess, Pt 1, pp 153-56; George F. Lemmer, USAF Manpower Trends, 1960-63, Chap V (AFCHO, Mar 1965).

13. Hearings for 1964, 88th Cong, 1st Sess, Pt 1, pp 153-56; DOD Annual Report, FY 1961, p 297; DOD Annual Report, FY 1963, p 255.

14. Brief of ISA Study (TS), "Need for U.S. Ground Forces; Nonnuclear and Battlefield Nuclear," n. d., but about 15 Sep 63, D/Plans file RL (63) 22, sec 3; President Kennedy's Messages on Defense Budget and State of the Union, 28 Mar & 25 May 61, N.Y. Times, 29 Mar & 26 May 61; Hearings for 1962, 87th Cong, 1st Sess, Pt 3, pp 19-23, 79.

15. Ltr (S), Col Luther H. Richmond, Dep D/Plans, to D/Opl Rqmts, 25 Jun 62, subj: Justification for Increased Airlift Forces; House Hearings for 1965, 88th Cong, 2d Sess, Pt 4, pp 64-65, 502-503; Aircraft/Missile Digest (S), USAF Cargo Aircraft, Jun 1960, 1961, 1962, 1963, and 1964; draft (U) of Annual Report of SAF, FY 1964, p 17, in AFCHO files.

16. Monthly Aircraft/Missile Digest (S), USAF Cargo Aircraft, Jun 1962-64; USAF Selected Statistics (S), Oct 64, Airlift Program, FY 1965-69; Hist (TS), D/Plans, Jan-Jun 63, pp 65-66; Hist of TAC (S), Jul-Dec 63, pp 445-47; House Hearings for 1964, 88th Cong, 1st Sess, Pt 1, pp 153-56.

CHAPTER II

1. Ltr (S), Col Luther H. Richmond, Dep D/Plans, to D/Opl Rqmts, 25 Jun 62, subj: Justification for Increased Airlift Forces; AF Planners memo No. 181-62 (S) by Brig Gen Robert F. Worden, Dep D/Plans, 14 Nov 62, subj: Recommended FY 64-68 General Purpose Forces (J-5 2285/87/D).

2. Hearings for 1965, 88th Cong, 2d Sess, Pt 4, pp 64-65, 223-26, 502-503; Hist (TS), D/Plans, Jan-Jun 63, pp 66.

3. Hist of TAC (S), Jul-Dec 63, pp 709-712; draft (U) of Annual Report of SAF. FY 1964, p 11, in AFCHO files; Defense Department Digest (U), Vol 2, No. 7, 15 Apr 65, p 6.

4. Hearings for 1964, 88th Cong, 1st Sess, Pt 2, pp 418, 432-33; Hearings for 1965, 88th Cong, 2d Sess, Pt 4, pp 453-55.

5. Hearings for 1965, 88th Cong, 2d Sess, Pt 4, pp 223-26.

6. Maxwell D. Taylor, The Uncertain Trumpet, (N.Y. 1959), Chapt IX, especially pp 169-71; OSAF Airlift Study (U) by Edward J. Driscoll, ASAF (M), 15 Mar 61, OSAF file 731-61.

7. Driscoll's Airlift Study, as cited above; Hildreth, pp 49-52.

8. Ltr (S), Col Luther H. Richmond, Dep D/Plans, to D/Opl Rqmts, 25 Jun 62, subj: Justification for Increased Airlift Forces; ltr (C), Gen Curtis E. LeMay, C/S USAF, to Gen Paul D. Adams, CINCSTRIKE, 18 Jul 62; ltr (C), Adams to LeMay, 26 Jul 62, subj: Army Airlift Requirements.

9. Ltr (S), VC/S Wm. F. McKee to Commandant, Marine Corps, 1 Dec 62, subj: Airlift Support to Marine Corps; ltr (S), McKee to Lt Gen Joseph W. Kelley, MATS, same date and subj; ltr (S), Maj Gen John K. Hestor, Asst VC/S, to MATS, 20 Feb 63, same subj.

10. Hearings for 1965, 88th Cong, 2d Sess, Pt 4, p 526.

11. Ltr (S), Maj Gen David A. Burchinal, D/Plans, to D/Opl Rqmts, 7 May 62, subj: Increased Emphasis on Improving Airlift Forces to Support Joint Operations, w/2 atch.

12. Hearings for 1964, 88th Cong, 1st Sess, Pt I, pp 132-33; Hist of TAC (S), Jul-Dec 63, pp 8-13.

13. Ibid.

14. Hist of TAC (S), Jul-Dec 63, pp 19-20; Air Force Times, 15 Apr 64; Senate Hearings before Cmte on Armed Services & Cmte on Approp, DOD Appropriations for 1965, 88th Cong, 2d Sess, Pt 1, pp 727-29.

15. Hist of TAC (S), Jul-Dec 63, pp 16-20; Hist (TS), D/Plans, Jan-Jun 64, pp 21-26; Jul-Dec 64, pp 197-98; New York Times, 11 Jan 65; Air Force Times, 27 Jan 65; presentation (C) by Gen Howell M. Estes, Jr., Cmdr, MATS, Pentagon, 19 Nov 64. For an Air Force report on Goldfire I, see Maj Robert G. Sparkman, "Exercise Gold Fire I," Air University Review, XVI, No 3, Mar-Apr 65, pp 22-44.

16. Statement (U) of SOD Robert S. McNamara before the House Armed Services Cmte on FY 1966-70 Defense Program and 1966 Defense Budget, 18 Feb 65, pp 84-85, in AFCHO files; hearings for 1966, 89th Cong, 1st Sess, Pt 3, p 34.

CHAPTER III

1. Memo (U), SAF Zuckert to Dep ASAF Edward J. Driscoll, 6 Mar 61, OSAF file 731-61; memo (U), DSOD Roswell L. Gilpatric to Sec of Mil Deps, et al, 22 Feb 63, subj: Organization and Management of Military Airlift.

2. Alfred Goldberg, ed., A History of the United States Air Force, 1907-1957 (Princeton, N.J. 1957), pp 147-48.

3. "Organization and Management of Airlift" (S), by OSD Airlift Study Group, n.d. but about 1 Jan 64, pp 15-40, in D/Plans file RL (64) 77-2.

4. Ibid.

5. Ibid.; Hist (TS), D/Plans, Jan-Jun 64, pp 204-208; Hist of TAC (S), Jul-Dec 63, pp 445-47.

6. Hist (TS), D/Plans, Jul-Dec 62, pp 219-21.

7. Ltr (U), Col Frank R. Pancake, Asst Dep D/Plans, to D/Ops, et al, 18 Jan 62, subj: Proposed Reorganization of Airlift Forces; memo (U) for the record by Col Pancake, 23 Apr 62, same subj; ltr (S), Gen Walter C. Sweeney, Jr., to Gen LeMay 14 May 62, same subj; ltr (S), Gen Paul D. Adams, CINCSTRIKE, to Maj Gen Daniel F. Callahan, D/J-4, Joint Staff, 26 Apr 63; Hist of TAC (S), Jul-Dec 63, pp 5-6.

8. Memo (U), DSOD Roswell L. Gilpatric to Sec of Mil Deps, Chmn JCS, et al, 22 Feb 63, subj: Organization and Management of Mil Airlift; "Organization and Management of Military Airlift," (S), as cited above.

9. Ltr (C), Col Harold F. Layhee, Asst Dep D/Plans, to D/Plans, 13 Feb 64, subj: Airlift Study, 2 incls; draft of memo (U), SAF Zuckert to SOD McNamara, n.d., but about 4 Mar 64, subj: Study on Org and Mang of Military Airlift.

10. Memo (U), Col Roger E. Phelan, Off D/Plans to Dep D/Plans, 28 Feb 64, subj: Org and Management of Mil Airlift, w/atch Talking Papers; memo (U), Gen Barksdale Hamlett, Act Chmn, JCS, to SOD, 6 Mar 64, subj: Study on Org and Management of Mil Airlift; Estes Briefing in Pentagon, 19 Nov 64.

11. Ltr (U), Gen Wm. F. McKee, VC/S, to PACAF, MATS, TAC, and USAFE, 12 May 64, subj: USAF Response to DOD Airlift Study, and required follow-on Action; ltr (U), Maj Gen John K. Hester, Asst VC/S, to ASAF (I&L), 26 Mar 64, subj: Letter of Transmittal, w/atch Background and Talking Papers; Hist (TS), D/Plans, Jan-Jun 64, pp 208-212; Jul-Dec 64, pp 298-304.

12. Ltr (U), Hester to ASAF (I&L), 26 Mar 64, as cited above; Hist (TS), D/Plans, Jan-Jun 64, pp 208-212; Jul-Dec 64, pp 298-304.

CHAPTER IV

1. Supplement to Air Force Policy Letter for Commanders, No. 1, Jan 65; Statement (U) of SOD before House Armed Services Cmte on FY 1966-70 Defense Program and FY 1966 Budget, 18 Feb 65, pp 117-19; USAF Information Sheet: C-141A Starlifter, Jun 65; note (U), to AFCHO from Col Mario A. Garuti, D/Aerospace Programs, 24 Jan 66.

2. Hearings for 1965, 88th Cong, 2d Sess, Pt 4, pp 224-26, 435-55.

3. Memo (C), John L. McLucas, Dep D/Tactical Warfare Systems, DDR&E, to ASOD (Comp), 6 Aug 63, subj: CX-4 Cost Effectiveness Studies; memo (C) Dr. Harold Brown, DDR&E, to ASAF (R&D), same date and subj.

4. Memo (S), R Adm J. W. Davis, Dep D/Joint Staff, to SOD, 11 Jan 64, subj: CX-4 Cost Effectiveness Study and Overall Airlift Mix.

5. Hearings for 1965, 88th Cong, 2d Sess, Pt 4, pp 224-26, 453-55.

6. Ibid., p 526; Conversation with Lt Col F. C. Thayer, D/Plans, 16 Apr 65.

7. Supplement to Air Force Policy Letter for Commanders, No. 12, Nov 64, pp 15-18.

8. Hist (TS), D/Plans, Jul-Dec 64, pp 139-40.

9. Supplement to Air Force Policy Letter for Commanders, No. 1, Jan 65, pp 27-28; SOD Statement before House Armed Services Cmte, 18 Feb 65, pp 115-18.

10. Goldberg, p 212; Arthur K. Marmor (S), The Search for New USAF Weapons, 1958-1959 (AFCHO, Apr 1961), pp 49-50; Hist of TAC (S), Jul-Dec 63, pp 299-302.

11. Memo (S), Brig Gen C.E. Hutchin, Jr., D/Mil Ops, USA, to D/Plans & Policy, Joint Staff, 12 Jan 62, subj: Intratheater Airlift; memo (S), Lt Gen Wm. P. Ennis, Jr., D/WSEG, to Chmn JCS, 13 Apr 62, same subj.

12. Report (C) by J-5 to JCS, 11 Jan 62, subj: Intratheater Airlift (J-5 2016/130/2, w/encl); memo (C) Chmn JCS to SOD, 30 Jan 62, same subj.

13. WSEG Report No. 64 (S), "Transport Aircraft for Intratheater Airlift Missions, 1962-1969 Time Period," 15 Oct 62, Vol I.

14. Ibid., pp 1-8.

15. Ibid., Vol. II, pp 5-8.

16. Memos (S), Dep D/Plans and D/Plans to C/S USAF, 9 & 30 Jul 63, subj: Requirements for an Intratheater Assault Transport Aircraft (JCS 2016/148); memo (S), Gen Curtis E. LeMay, Actg Chmn JCS, to SOD, 27 Sep 63, same subj.

17. Memos (S) of Dep D/Plans, D/Plans, & Gen LeMay, as cited above; Hearings for 1965, 88th Cong, 2d Sess, Pt 4, pp 501-502; Hist of TAC (S), Jul-Dec 63, pp 299-302.

18. Supplement to Air Force Policy Letter for Commanders, No. 12, Nov 64, pp 16-18.

19. Ibid., pp 5-10; Air Force and Space Digest, Sep 64, p 213; Hearings for 1966, 89th Cong, 1st Sess, Pt 3, p 881, Pt 5, pp 126-27.

20. Supplement to Air Force Policy Letter for Commanders, No. 12, Nov 64, pp 16-17.

CHAPTER V

1. Statement of SOD McNamara before House Armed Services Cmte on FY 66-70 Defense Program and 1966 Defense Budget, 18 Feb 65, pp 115-118; Hist (TS), D/Plans, Jul-Dec 64, pp 139-40.

APPENDIX I

USAF Cargo Planes, FY 1960-1964

	1960	1961	1962	1963	1964
C-97	3	-	-	-	-
C-118	95	78	78	29	(108 active) 1
C-119	62	-	-	No longer first line but 131 active	-
C-121	65	65	63	10	-
C-123	202	192	124	(Troop carrier) 38	(177 active--used mainly in SAW) 3
C-124	283	162	66	No longer first line but 394 active	No longer first line but 374 active -
C-130	254	279	(Troop carrier) 324	(Troop carrier) 322	(Tactical cargo) 296
C-130E			(Air transport) 6	(Medium cargo) 80	(Medium cargo) 228
C-131	109	103	93	27	(73 active) 9
C-133	41	48	47	No longer first line but 46 active	44 active -
C-135			40	44	43
C-137		3		4	4
VC-137	3		3		
C/VC-140			4	14	15
WV-2			5		
C-141					6
First Line	1,117	930	853	568	605
Total Active	2,549	2,396	2,504	2,592	2,327
TOTAL	3,025	2,566	2,745	2,906	2,580

SOURCE: Monthly Aircraft/Missile Digest, as of 30 June 1960-1964.

Note: Major USAF Transports began to enter inventory as follows: (a) C-124 in 1950, (b) C-130 in 1956, (c) C-130E in 1962, (d) C-133 in 1957, and (e) C-141 in 1964.

APPENDIX II

USAF Airlift Program 1964-1973

END FY		64	65	66	67	68	69	70	71	72	73
C-118	Sqd	3									
	Acft	48	-	-	-	-	-	-	-	-	-
C-123	Sqd	5									
	Acft	80	-	-	-	-	-	-	-	-	-
C-124	Sqd	21	19	16	11	7	2	1			
	Acft	336	308	260	180	116	32	16	-	-	-
C-130	Sqd	28	32	32	32	32	32	29	25	21	16
	Acft	436	504	504	504	504	496	456	392	336	256
C-133	Sqd	3	3	3	3	3	2				
	Acft	44	44	40	40	40	28	-	-	-	-
C-135	Sqd	3	2	1	1						
	Acft	38	28	14	14	-	-	-	-	-	-
C-141	Sqd		1	5	10	13	13	13	13	13	13
	Acft	-	16	80	160	208	208	208	208	208	208
C-5A	Sqd						1	2	3	3	3
	Acft	-	-	-	-	-	16	32	48	48	48
TOTAL	Sqd	63	57	57	57	55	50	45	41	37	32
	Acft	982	900	898	898	868	780	712	648	592	512

Special Air Warfare Forces Program, 1964-1973

END FY	64	65	66	67	68	69	70	71	72	73
C-123	-	92	92	92	92	92	92	92	92	92
A-1E	50	68	68	68	68	68	68	68	68	68
C/HC-47	24	31	31	31	31	31	31	31	31	31
U-10	20	20	20	20	20	20	20	20	20	20
B-26	33	33	33	33	33	33	33	33	33	33
C-46	24	12	12	12	12	12	12	12	12	12
T-28	33	14	14	14	14	14	14	14	14	14
TOTAL	184	270	270	270	270	270	270	270	270	270

SOURCE: US Air Force, Selected Statistics, AF Airlift Program, June 1965, pp 3-7A, 3-8.

[redacted]

GLOSSARY

AFCHO	USAF Historical Division Liaison Office
AFLC	Air Force Logistics Command
AFRes	Air Force Reserve
AFSC	Air Force Systems Command
ANG	Air National Guard
ASA	Assistant Secretary of the Army
ASAF	Assistant Secretary of the Air Force
ASN	Assistant Secretary of the Navy
ASOD	Assistant Secretary of Defense
ASSS	Air Staff Summary Sheet
CASF	Composite Air Strike Force
CRAF	Civil Reserve Air Fleet
Chmn	Chairman
CINCARIB	Commander-in-Chief, Caribbean
CINCEUR	Commander-in-Chief, Europe
CINCPAC	Commander-in-Chief, Pacific
Cmte	Committee
COIN	Counterinsurgency
Compt	Comptroller
C/S	Chief of Staff
CX-HLS	Cargo Aircraft (experimental) Heavy Logistic System
DCS	Deputy Chief of Staff
DDR&E	Director of Defense Research and Engineering
Dep SOD	Deputy Secretary of Defense
D/Mil Ops	Director(ate) of Military Operations, US Army
DOD	Department of Defense
D/Opl Rqmts	Director(ate) of Operational Requirements
D/Ops	Director(ate) of Operations
D/Plans	Director(ate) of Plans
ISA	International Security Affairs
JCS	Joint Chiefs of Staff
JSOP	Joint Strategic Objectives Plan
JSSC	Joint Strategic Survey Council
J-4	Logistics Directorate of JCS
J-5	Plans and Policy Directorate of JCS

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G L O S S A R Y (Cont'd)

LSS	Logistic Support Squadrons
MAC	Military Airlift Command
MAP	Military Assistance Program
MATS	Military Air Transport Service
NATO	North Atlantic Treaty Organization
n.d.	No date
NSC	National Security Council
OSAF	Office of the Secretary of the Air Force
OSD	Office of the Secretary of Defense
PACAF	Pacific Air Forces
P&P	Plans and Programs
POL	Petroleum, Oil, and Lubricants
R & D	Research and Development
SAW	Special Air Warfare
SAWC	Special Air Warfare Center
STOL	Short Takeoff and Landing
STRAC	Strategic Army Corps
STRICOM	Strike Command
Subcmte	Subcommittee
TAC	Tactical Air Command
TARC	Tactical Air Reconnaissance Center
TAWC	Tactical Air Warfare Center
USAFE	United States Air Forces in Europe
VC/S	Vice Chief of Staff
V/STOL	Vertical and/or Short Takeoff and Landing
VTOL	Vertical Takeoff and Landing
WSEG	Weapons Systems Evaluation Group

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21. AFAMAA
22. AFODC
23. AFOAP
24. AFOAPB
25. AFPDC
26. AFRDC
27. AFRDDE
28. AFRDQ
29. AFRDQRA
30. AFSDC
31. AFSPD
32. AFSTP
33. AFXDC
34. AFXOPFH
35. AFXOPX
36. AFXPD
37. AFXPDA
38. AFXPDO
39. AFXPDS
40. AFXSA
41. AFXSAG

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42. PACAF
43. SAC
44-45. TAC
46-47. MAC
48. USAFE
49. AFLC
50. AFSC
51. ATC

OTHER

52-53. ASI (HAF)
54-62. ASI (HA)
63-80. AFCHO (Stock)