

three weeks, the temporary camp had been completed. It served MABS-16's Marines for more than two months until a more permanent—and more livable—cantonment was constructed on the opposite side of the airfield.

Phase II involved construction of a second camp that, while still expeditionary in nature, was more suited to protect the Marines from the monsoon rains that would soon be upon them. Construction of this camp took about 11 weeks to complete. The work was done by the engineer platoon with 1 officer and 21 enlisted Marines, augmented by 21 additional carpenters from the 1st Marine Aircraft Wing. Plans were drawn up to build the camp above ground, as it was anticipated that the entire area would be under water when the monsoon season began in the early summer. An area of approximately eight acres, which was relatively flat and free of vegetation and also in close proximity to the airfield, was selected as the site for the camp.



*The squadron mess hall was located in one of the existing structures that had been rehabilitated by the engineers. Notice that it was built up off of the ground to prevent flooding during the monsoon season.*

Three buildings, all in extremely poor states of repair, existed in the area chosen for the camp. During Phase II of the construction, these buildings were renovated and put into service. The first was designated as the camp's future mess hall. Renovation began with the removal of all internal partitions and the screening of all windows. Storage areas were constructed on both ends of the building by

extending the existing decks and enclosing them. The second building was rehabilitated and turned into office space. It housed the sick bay, post office, exchange, squadron office, communications switchboard, and the motor transport office. A dry stores warehouse was also located in this building. The third building was given to Air America for its office spaces.



*Strong back tents were erected in the permanent camp, which was built entirely off the ground to protect it from flooding during the monsoon season. The author is pictured in the authorized "uniform of the day," cutoff utilities, combat boots – rubber boots were substituted during the monsoon season – and tee shirts.*

Five large platforms, roughly four feet off the ground, were erected in the main camp area. The platforms sat on approximately 800 posts placed at eight-foot intervals and sunk into the ground to a depth of 30 inches. The two largest platforms were 258 feet in length and 40 feet wide. Each could accommodate 13 strong-backed general purpose tents. The strong-backed general purpose tents were constructed in a manner that allowed all of the sides to be rolled up when the weather permitted. This allowed fresh air and breezes to flow through the tents. To keep out bugs and other undesirable critters, splashboards 15 inches in height were placed around each strong-backed tent from the deck up and the remainder of the frame up to the roof of the tent was screened in.

The third and fourth platforms were 100 feet long by 40 feet wide. One of these accommodated five strong-backed general purpose tents. The camp's laundry

and bath unit were placed on the other. The final platform measured 48 feet by 40 feet and was built to accommodate two corrugated roofed buildings of 20 feet by 22 feet. Inside of each of these buildings, a strong-backed command post tent was erected. These two buildings were joined together and served as the squadron's command center.



*During the monsoon rains, the ground below the elevated cantonment was frequently flooded. The rehabilitated original building on the left housed the squadron's administration offices. On the right are strong back billeting tents.*

A 31-foot by 15-foot wash house was also constructed and could accommodate up to 40 Marines at a time. Running water was provided from an adjacent 15-foot by 15-foot tower built 10 feet off the ground and holding a 3,000-gallon water tank. From this tank, two-inch pipes carried the water into the wash house to individual faucets that terminated at each of the 40 washing stations. Individual racks were constructed into which each Marine could place his helmet that served as his sink. Behind the billeting area, several heads were constructed. All of the platforms and the heads were connected by five-foot-wide walkways, each of which had a removable section to allow emergency (fire or ambulance) vehicles to drive through the camp.

Approximately 250,000 board feet of lumber, all rough mahogany, was used in constructing the camp. In addition, 600 pieces of corrugated tin, 150 rolls of screen, and 60 kegs of nails were used. All of this was purchased locally at a cost of approximately \$22,000. The permanent cantonment was ready and occupied before the summer rains began. Even without the rain, the slight elevation, wooden flooring, and screened-in billets were a welcome change from living on the ground with the tent flaps always down.

## Logistics

Marine Air Base Squadron-16 deployed with 44 pieces of rolling stock, which included, among other things, six M-211s (two-and-one-half-ton trucks), five M-38A1s (quarter-ton trucks), 10 M-7s (water trailers), two MB-5s (aviation crash/rescue fire trucks), and one D-4 (crawler tractor with dozer blade). Given the extremes of both the dry and the rainy seasons, all rolling stock required special care. During the dry season, the roads were covered with a fine powdery dust to a depth of two to three inches, which required changing the oil in the air cleaners twice a week and lubricating all vehicles weekly. During the rainy season, particularly in August and September, all vehicles traveled or stood in water, often above their axles. To keep them operational, they were lubricated twice a week. Despite close attention to these problems, many drive shaft universals, wheel bearings, and brake cylinders and linings required replacement at the end of the monsoon season in October. The generators' radiators rusted and gummed up more frequently than the radiators of the vehicles and required frequent flushing to prevent overheating.<sup>23</sup>

The food service throughout the deployment was exceptional. After only 10 days on "C" rations, a galley was established in a fly tent, and three general purpose tents were outfitted to serve as the dining hall. Packaged Operational "B" rations with a fresh food supplement were served initially. Soon thereafter, fresh food substitutions for the "B" rations became available through the Navy commissary in Bangkok. Dry stores were transported from Bangkok by rail, and fresh food arrived in Udorn on MABS-16's R4D-8. On 29 April, the engineers completed work on the abandoned building that had been designated as the squadron mess hall, and it opened for business. Complete with refrigeration, storage space, galley, mess deck, and a dry stores warehouse, this new mess hall, operated by a mess management chief, six cooks, one baker and, after early May, several indigenous mess men, served three excellent meals daily for the duration of the operation.

The acquisition of water and ice proved to be a unique, but not insurmountable, problem for the deployed force. Filtered, not potable, water was used in the camp's showers and laundry. Although not suitable for drinking, it was available in unlimited supply and was inexpensive to purchase. The utilities section purchased it from the town of Udorn.

To provide water suitable for drinking, a water point was established at the edge of a pond about three-quarters of a mile from the camp. Unlimited amounts of water were available. Water from the pond was processed into potable water and distributed to the mess hall and the many "water buffalos"—400-gallon water trailers—that were sited throughout the camp. Marine Air Base Squadron-16 did not lack for water at any time during its stay in Thailand.

The mess hall, which used a fairly large amount of ice for its daily operations, required special consideration. Locally produced ice could not be used because it was made from unpurified water. After several visits to the local ice house, the Marines were successful in acquiring three large ice freezing cans on a temporary basis. These cans were taken back to the camp, where they were scrubbed, chlorinated, marked with an identifying paint, and then returned to the ice house along with a water buffalo containing potable water. The ice freezing cans were filled and the water was frozen. The Marines reached an agreement with the ice house staff that the resultant blocks of ice would be sold only to the Marines. Each day, the Marines purchased at least one block of ice from the ice house. The empty can was then refilled with potable water and returned to the freezer. When the water buffalo ran low, it was replaced with a full buffalo towed in from the water point. The process became routine, the language barrier diminished, and the mess hall was never without ice to support its operations.

Just before dark on 23 March, MABS-16's tactical airfield fuel dispensing system arrived at Udorn on 1st Marine Aircraft Wing aircraft. Before noon the following day, a 20,000-gallon system was installed and civilian contractors were filling it with aviation gasoline from tank trucks. On 2 April, a second 20,000-gallon system was installed and filled with JP-4 aviation fuel. These systems were maintained and operated day and night, seven days a week, by one staff sergeant, two corporals, and three lance corporals. The service that they provided during Operation Millpond was nothing short of outstanding.

To provide fuel to locations away from the Udorn airfield—which allowed the Air America pilots to refuel their aircraft without having to return to Udorn—the Marines began filling 55-gallon drums with aviation gas and having them airlifted to remote sites. On some days, as many as 200 drums were filled and airlifted to the alternate refueling sites. Over time, the Marines accumulated 2,000 drums (55-gallon) to meet their requirement to support the remote fueling sites.<sup>24</sup>

## Medical Support

The first flight into the airfield at Udorn on 23 March carried two Navy corpsmen, a field ambulance, and emergency sick-call supplies and equipment. This initial contingent was followed later the same day by a medical officer and a third corpsman. By the third day of the deployment, the medical staff had its full complement of eight corpsmen and one medical officer and its medical block, which was capable of supporting 500 men in the field for 30 days. Initially, sick call was conducted out of the field ambulance; however, by 26 March, a general purpose tent had been erected for the medical staff and, joined by the dental department, they opened for business. Although slightly cramped and dusty, the tent proved adequate, and the medical officer and corpsmen made it their place of business for a month and a half.

By early May, the engineer detachment had rehabilitated the second of the three buildings located in the new cantonment area, and on 8 May, the medical officer and his corpsmen moved into their new space at the permanent camp site. It was roofed, screened in, and well lighted, and it provided sanitary conditions adequate to allow the doctor to perform minor surgery. The plywood deck was easy to clean and kept insects from entering the sick bay between the floorboards. Further improvements included painting, the installation of white cotton sheeting on the overhead (which reduced the heat and reflected light), and the installation of a porcelain sink with running water.

Field sanitation, a critically important issue in the tropical environment of northeast Thailand, was closely monitored by the squadron's medical personnel. The mess hall was inspected daily. With schistosomiasis, a parasitic disease spread by a waterborne pathogen, a serious problem in northeast Thailand, the medical personnel closely monitored the camp's water supply. Their vigilance kept water supply problems to zero for the entire period of the operation. The heads in the original camp were inspected and burned out every five to seven days, and in the permanent camp, the concrete cistern-chemical heads were treated with unslaked lime twice a week. Insect control, a joint responsibility of the camp police sergeant and the sick bay personnel, was managed by use of a Todd Insecticidal Fog Applicator that dispensed a DDT fog in the general camp area on a regular schedule.

Sick call was conducted twice daily. During July, a typical month with 253 military personnel on board, 429 out-patient visits were made to the dispensary. Among the medical problems treated were 43 cases of diarrhea and digestive tract infections; 64 diseases of the eye, ear, nose, and throat; 17 acute respiratory infections; 133 dermatological problems; 2 injuries; 30 surgical conditions; and 8 cases of venereal disease.

The medical staff encountered few serious problems during the operation. Some of the more serious medical problems diagnosed and treated during the deployment included eight cases of malaria, three minor fractures, two burn cases (one requiring emergency hospitalization), one snake bite (a bamboo snake—not serious) and two scorpion stings, eight cases of heat exhaustion (all in the early weeks of the operation), and 37 cases of venereal disease.

Marines contracting a venereal disease were treated, usually with procaine penicillin or chloromycetin. In addition, they were placed on 14 days medical restriction and were counseled by the commanding officer. The prostitute involved was identified, and local authorities ensured that she visited the local public health clinic (supported by UNICEF funds) for diagnosis and treatment.



## Communications

The Communications Section was made up of personnel and equipment drawn from the Communications Company, 3d Marine Division, Marine Aircraft Group-16, and Headquarters & Headquarters Squadron-1, 1st Marine Aircraft Wing. Its mission was twofold: to provide internal communications within the MABS-16 cantonment, and to provide voice and teletype radio communications to MABS-16's higher echelons of command.

To satisfy the first requirement, MABS-16 deployed with 44 EE-8 battery-powered field telephones, one SB-86 switchboard, and one SB-22 switchboard. As with the field phones, both switchboards were "field equipment" and were battery operated. Internal communications were quickly established throughout the initial base camp, with additional lines being run as additional tents were erected and occupied. Concurrent with the construction of the more permanent cantonment, plans were developed to provide it with telephone service. As soon as the second of the three preexisting buildings was rehabilitated by the engineers, the SB-86 switchboard was installed alongside of the MABS-16 offices, the sick bay, motor transport, and material offices. Lines were quickly run to all offices and other work spaces, the flight line, and some of the billeting tents, and internal communications



*The communications center was established in a permanent structure outside of the main camp. The wires in the foreground held up a pole that provided elevation to the radio's antenna.*

were established. This system served MABS-16's internal communications needs until the squadron departed in late October. Prior to passing the telephone exchange to Air America in October, the Marines made several upgrades to the system. Improvements included replacing the military "slash wire" that connected each telephone to the main switchboard with WD-110 wire, running all lines overhead, converting to a central battery system, and substituting Air America's desk phones for the Marines' military EE-8s.



*The message center Marines and technicians who ran and maintained the MABS-16 communications center, which is in the rear of the photograph. (The author is third from the right in the front row.)*

In satisfying the second element of its mission, the communications section provided the link between MABS-16 at Udorn and its supporting organizations on Okinawa and at the Marine Corps Air Station, Iwakuni, on the island of Kyushu, Japan. In support of MABS-16's external communications requirements, two major circuits were maintained throughout the deployment. The first, which began operations on 23 March, was between Udorn and Bangkok.<sup>25</sup> This circuit employed the AN/TRC-75 transmitter-receiver (the state-of-the-art radio transmitter-receiver at the time), with supporting TT-4s and AN/GGC-3 teletype machines. The AN/GGC-3 teletype machine employed a paper tape that was perforated each time a key on the keyboard was depressed. Complete messages were drafted on these paper tapes. Then, employing a one-time encrypting tape that was duplicated on the receiving end of the circuit, the message was transmitted in encrypted form. The circuit was operational from 23 March and was



capable of transmitting voice, Morse code, and teletype signals. The second circuit linked MABS-16 at Udorn with the Naval Communications Facility in the Philippines (NavComPacPhil). On the Udorn end of this circuit, the Marines employed a Commander in Chief, Pacific Fleet (CinCPacFlt) Communications Contingency Package, provided to MABS-16 specifically to facilitate external communications. Capable of both voice and teletype communications, this circuit was established on 8 April and was fully operational by 15 April.

High temperatures, poor signals, and mediocre antennas plagued communications on the Udorn-Bangkok circuit, and teletype incompatibility frustrated communications on the Udorn-NavComPacPhil circuit in the early days of the deployment. Signals improved markedly on the Udorn-Bangkok circuit after much experimentation with long-wire antennas cut specifically to frequency length, which were employed at Udorn, and the installation of a 35-foot fiberglass antenna to the AN/TRC-75 on the Bangkok end of the circuit. The teletype incompatibility problem on the Udorn-NavComPacPhil circuit was quickly resolved. With minor exceptions, both circuits enjoyed “five by five” communications for the duration of the deployment.



*An AN/TRC-75 transmitter-receiver was set up outside of the communications center. The poles in the background supported the long-wire antennas that attached to the radio.*

Not much could be done about the weather. Early in the deployment, the communications center was moved outside of the main camp and into a small wooden garage with a cement floor. This provided a cleaner environment for the communications equipment and allowed fans to be installed that somewhat mitigated the heat, much to the delight of the communications center Marines and their equipment. Two general purpose tents were erected adjacent to the garage where a radio, teletype, switchboard, and telephone maintenance shop was established. As the communications circuits were maintained 24 hours a day, a small billeting area was also established in the tents for Marines to use between communications center watches.

During their periods of operation, which ran from 23 March to 26 October, both circuits serviced considerable amounts of traffic. On the Udorn end on the Udorn-Bangkok circuit, 984 encrypted radio-teletype messages were sent and 2,991 were received. On the Udorn side of the Udorn-NavComPacPhil net, 1,919 encrypted radio-teletype messages were sent and 1,290 were received.<sup>26</sup>

## Morale, Welfare, and People-to-People Programs

The morale of the squadron's Marines was excellent throughout the deployment. It was sustained in part by the knowledge that the Marines were deployed on an actual operational mission. Superb mail service throughout the deployment also contributed to the high morale. The MABS-16 fleet post office address did not change, so mail was never interrupted. Mail was delivered at least



*Marine aircraft visited the squadron at least twice weekly bringing mail, repair parts, and other needed supplies.*

twice a week on the normal courier flights from MCAF Futema, Okinawa. Frequently, other flights would stop by Futema and pick up mail waiting to be delivered. A post exchange was established on 27 March, less than a week after the Marines began arriving at Udorn. Initially stocked only with necessities, its merchandise expanded considerably when it moved into a larger space in the permanent camp in late April. As the deployment matured and a more normal routine evolved, the Marines constructed a volleyball court, horseshoe pits, and two softball fields, and an organized athletics program emerged.

In late May, after all of the squadron's personnel had moved to the permanent camp, the Western Pacific Armed Forces Film Exchange began providing MABS-16 with five or six movies each week. Free popcorn was provided, and the movies, which were shown in the mess hall, soon became the main source of evening entertainment. Three additional strong backed tents erected on a platform constructed from leftover materials served as the special service area. One tent was used for beverage sales—both soft drinks and beer could be purchased—and as a lounge area; a second housed a ping pong table, a reading area, and a barber shop. The third was equipped with a rostrum for religious services.



*PFC Bruce Powell, a communications center Marine, on a balcony overlooking the center of Udorn, Thailand. Roads ran in all directions, including to the Laotian border and on to Vientiane.*

After about 10 days, the command initiated a liberty program for the deployed Marines. Liberty was limited to 100 Marines at a time; more than that number, it was determined, would overwhelm the town. As a security measure, Marines of all grades were issued liberty cards, and whenever a Marine was late over liberty, the



*PFC Bruce Powell and the author in the driver's seats of sam los, the three-wheeled bicycles that were the Marines' main transportation between their camp and liberty in the town of Udon.*

Udon police would turn out every officer on its force to find him. Travel to and from town, about three miles distant from the camp, was by a *sam lo*, a three-wheeled bicycle rickshaw peddled by a man in the front with up to two passengers seated in the back. The cost of a one-way trip was three to five baht. (The exchange rate during the Marines' stay in northeast Thailand remained steady at 20 baht to one U.S. dollar.) The only real bar in town was owned by a Thai army lieutenant who spoke English and was also the chief of police. It received a considerable amount of the Marines' business. Several restaurants were available where a liter of Thai beer could be purchased for seven baht, and a very large plate of beef or chicken fried rice—very spicy—could be had for the same price. The local Thai citizenry were welcoming and friendly, and the Marines reciprocated. There were no adverse incidents for the duration of the deployment.

One-to three-day rest and recreation trips to Bangkok began in May. Marines traveled "space available" on the assigned R4D-8 or a Marine Corps DC-3, the latter aircraft often being piloted by a chief warrant officer and a master sergeant. A small bus, operated by the Joint United States Military Assistance Group, brought the vacationing Marines from the Don Muang Airport to downtown Bangkok. The centrally located Metropole Hotel, where a double occupancy room with a good bed and air conditioning was available for five dollars, received most of the R&R



*This statue of a sitting Buddha greeted visitors as they entered the Marble Palace in Bangkok. The floors were made of highly polished marble imported from Italy.*

business. Meals and drinks were similarly inexpensive. A good steak or lobster dinner at any of the many excellent restaurants cost between \$1.50 and \$2.00. Drinks were about \$1.00 apiece. Cab drivers doubled as tour guides and for a very reasonable price would take Marines on tours of the city that included stops at several of the many beautiful Thai temples. For Marines who had saved some of their money, any of the many jewelry stores would make rings and other items in 24 hours. Black star sapphires were a favorite and were within the financial reach of nearly every Marine who wanted one. In 1961 the cost of two days in Bangkok was not beyond the reach of even the most junior enlisted Marine, and many took advantage of the opportunity to see one of Southeast Asia's most beautiful and modern cities.

A vibrant and successful people-to-people program received its start from the invitation of a local Udorn basketball team to the Marines to play an exhibition game on public courts in town. This initial game quickly developed into a nightly affair, with several Thai teams showing up to play and crowds of spectators frequently numbering as many as 2,000 people coming to watch. In late summer, the city sponsored a basketball tournament, with several Marine and local Thai teams participating. After several playoff rounds, the Marine Aircraft Tactical Unit-1 Marines





*Klongs (canals) run throughout the city of Bangkok. They carry off the monsoon rains and provide a watercourse for farmers to bring their vegetables and fruits from the countryside to sell to the city dwellers in "floating markets," located throughout the city.*

emerged victorious. They were awarded a large silver trophy, which was suitably engraved and as of this writing resides in the MAG-16 trophy case.

In addition to the sports activities, the Marines undertook several projects to assist the local mission church and Catholic school. Through contributions collected at the MABS-16 camp, the Marines purchased materials and a local American contractor laid a concrete floor in the church. Several Marines volunteered to instruct evening English classes, and several were invited to visit the Udorn Teachers College for Sunday afternoon meetings with the college's English classes.

## **Aircraft and Line Maintenance Operations**

The aircraft and flight line maintenance Marines quickly adjusted to the rigors of their assignments. While remaining cognizant of their longer-term mission of training Air America personnel in aircraft maintenance and flight-line operations, they also knew that their immediate goal was to keep the maximum number of Air America aircraft in the air. During April, the first full month of operations, they managed to keep an aircraft availability average of 18.16 for their 19 HUS-1 aircraft.





*Air America helicopters returning from a mission in Laos. Notice that there are no markings on the helicopters.*

Flight operations totaled 1,934.5 flight hours, for an average of 106.5 hours of flying time per helicopter. In May, they averaged an aircraft availability of 18.6 HUS-1s, which flew for a total of 1,750 hours.

The high availability rates were not achieved without much hard work on the part of the maintenance and flight-line crews and included many major repairs and the replacement of major components to the aircraft. During these initial two months of operation, the maintenance crews conducted 24 periodic calendar inspections, 19 engine build-up replacements, 5 main transmission changes, 8 major rotor changes, and 76 other component changes. The maintenance crews also repaired structural damage caused by 73 bullet strikes to the aircraft. The avionics shop serviced 115 major end items of helicopter equipment. With operational requirements demanding the maximum availability of aircraft, work was extended into the evenings, particularly on the flight line, where the Marines made concerted efforts to correct all of each aircraft's discrepancies prior to morning.

While June witnessed a significant decrease in battle damage, it was becoming increasingly more costly in maintenance hours and effort to keep Air America's overworked aircraft in the air. The maintenance problems were exacerbated by the frequent shortage of critical spare parts. During June, 60

aircraft-days were lost while awaiting parts. There was a solution to this problem, but it was not without cost. The number of aircraft grounded as a result of the lack of spares could be appreciably reduced by switching parts between aircraft. However, this practice added significantly to the maintenance work load measured in the increased hours required to take parts off one aircraft and put them on another. Nonetheless, in June, the Marines exchanged between aircraft eight tail rotor assemblies, two main rotors, two engine packages, and numerous other items such as carburetors, inverters and instruments. While this practice kept more aircraft in the air, it represented a considerably increased workload that had to be carried by the understaffed maintenance department.

A review of the spares resupply process found that the Air America stock levels at Don Muang Airport just outside Bangkok, the source of the maintenance department's spare parts, were inadequate to meet the requirements of 20 helicopters often flying excessively long hours.<sup>27</sup> Further, Air America's spare parts records cards contained a mix of Navy and Air Force numbers, which caused confusion when Air America entered the Navy supply system at Naval Supply Depot Yokosuka to order parts. To resolve this problem, the noncommissioned officer in charge of the Navy Supply Section that was located at Udorn with the aircraft maintenance department traveled to Don Muang Airport to establish a workable system. His visit resulted in an improved system that forwarded all spare parts requisitions to Naval Supply Depot Yokosuka in Navy language. This improvement, in turn, speeded up the resupply process and raised Air America's stockage levels at Don Muang Airport. While the spares levels improved, the maintenance crews at Udorn continued to be plagued by shortages for the duration of their tours.

Aircraft losses further reduced operational readiness. On 16 June, a HUS-1 made a forced landing on a sandbar in the Mekong River. To bring the helicopter to a location where it could be repaired, it was pulled through water that reached the level of the cockpit. The aircraft was repaired, but it was 30 June before it was returned to Udorn and put back into service. On 18 June, another HUS-1 was seriously damaged while aborting a landing at an altitude of 4,300 feet. Unable to check his rate of descent, the pilot settled his helicopter on a steep slope near the landing site. The helicopter rolled two complete revolutions before coming to a stop. Although selected items were salvaged, the aircraft was beyond repair and was destroyed.

There was significantly less work in July for the maintenance department Marines. This development resulted from a month of no battle damage and a sharply reduced requirement to perform major component changes. Despite this reduced work load, the maintenance crews kept an average of 16.9 aircraft in the air for a total of 1,625 flying hours, or an average of 96 hours per aircraft. One aircraft was lost due to an engine malfunction when the pilot was forced to land in an inaccessible site and the aircraft could not be recovered. On 23 and 24 July, two C-124s brought two HUS-1s to Udorn as replacements for the aircraft that had been

lost. They were quickly assembled and given the requisite test flights. No discrepancies were found, and the aircraft were immediately placed in operation.

From MABS-16's arrival at the Udorn airfield in late March, Air America personnel had worked closely with the aircraft maintenance and flight-line Marines to acquire the knowledge they needed to completely run operations when the Marines departed. With the end of July near, the 120-day mark—the outside limit of the Marines's expected stay—was approaching. In a first positive step toward the MABS-16 phase-out, Air America on 23 July assumed responsibility for all flight-line functions. This was a major milestone and a step in the right direction. Marines retained refueling responsibilities and continued to operate the tactical airfield fuel dispensing system, and a senior staff noncommissioned officer remained on the flight line as an advisor and coordinator between flight-line and hangar maintenance.

August proved to be a busy month for the maintenance department. In response to a Thai request, two Marine HUS-1s were deployed within Thailand to relocate the relay stations of a Thai TRC-24 radio relay system. Tragedy struck on 15 August when one of the helicopters crashed and burned in dense jungle just short of its intended landing site, located at an elevation of 3,000 feet. The crash killed two passengers in the cabin, and three crew members were seriously injured as a result of burns. The crew chief also sustained a compound fracture of his lower left leg. On 28 August, the second helicopter experienced engine failure and was forced down approximately 150 miles from the Marine base at Udorn. An engine package, borrowed from Air America, was trucked to the site of the downed aircraft and installed by MABS-16 Marines, who were assisted by members of the Royal Thai Air Force. The helicopter returned to Udorn on 2 September.

Concurrently, the Marines and Air America maintenance crews remained busy supporting operations in Laos. During the month, with an average of 15.3 helicopters available, Air America crews flew a total of 1,569 hours for an average of 102.5 hours per aircraft. A serious in-flight accident that resulted in major fuselage damage on the port side of a HUS-1 required the replacement of eight square feet of external "skin" and several supporting ribs in the area around the left pylon, and an additional 14 square feet of skin and several supporting ribs to repair the outside of the radio compartment. Lack of spare parts continued to plague the maintenance crews. Thirty-six aircraft days were lost in the month because the parts to put the helicopters back into service were not available.

On 8 August, an Air America helicopter was shot down behind enemy lines. The pilot made an emergency landing with the power on, and the crew escaped. After three days of evading enemy forces, all crew members were rescued with only minor injuries. The four helicopters that were involved in the search and rescue effort required significant metal repairs for damage resulting from enemy small-arms fire.

While the Marines continued to perform most of the maintenance functions, the plan to transfer responsibility for all maintenance to Air America remained on track. August saw the arrival of 27 new Air America employees, all of whom came with experience as general aircraft mechanics. They were assigned full time to classroom instruction during the day to familiarize them with the HUS-1 aircraft and then were assigned an evening shift on the flight line. Earlier in the month, a Sikorsky factory representative had arrived to provide technical assistance during the transition. He served primarily as a classroom instructor for the newly arrived employees. Late in the month, a tentative agreement was reached with the Air America station manager to effect the complete transfer of aircraft maintenance responsibilities in late September, well into the sixth month of the deployment.

Between 1 and 22 September, 15 helicopters on average were available for flight operations, and a total of 856.1 hours were flown. Battle damage increased somewhat during this period, with repairs required on seven aircraft. On 4 September, a HUS-1 was extensively damaged making a landing in rough terrain. After being hit by enemy fire while attempting to land in his primary zone, the pilot diverted to a secondary zone where his aircraft sustained major fuselage damage when it struck a tree stump. On 9 September, small-arms fire damaged a helicopter's tail rotor, necessitating the removal and replacement of the complete tail rotor assembly.

The passing of responsibility for aircraft maintenance from the Marines to Air America accelerated in September. On 5 September, Air America assumed responsibility for the tool room. Supplies not desired by Air America were made ready for shipment back to MAG-16 on Okinawa. The following day saw the arrival of 10 additional Air America mechanics. They immediately began a six-day period of instruction on the HUS-1 provided by the Sikorsky technical representative. With Air America personnel assuming much of the maintenance workload, the Marines began preparations in earnest for their departure. On 8 September, six enlisted Marines detached and returned to MAG-16 on Okinawa. The following day, the MABS-16 maintenance officer was detached.

On 20 September, an Air America representative receipted for all maintenance equipment and supplies that were to be left behind. All maintenance equipment and supplies not required by Air America had by this time been inventoried and boxed for return to MAG-16 on Okinawa. Plans had been made for the orderly detachment of Marine personnel. At 1630 on 22 September, with a total of 54 personnel assigned to the maintenance department, Air America assumed all responsibility for aircraft maintenance. In the avionics shop, where Air America staffing was still inadequate to sustain operations, three Marines remained to assist and instruct where necessary. By the beginning of October, six additional civilian avionics employees had arrived. That brought the total civilian strength to 12, the same number to which the Marines had staffed the shop. With operations running satisfactorily and only infrequent assistance required, the Marine avionics personnel were phased out and returned to MAG-16 on Okinawa on 15 October 1961.<sup>28</sup>

## Epilogue

The aircraft maintenance section's Marines were not the only ones planning for departure from Udorn. By early September, a plan had been finalized for the complete relief of MABS-16 and the assumption of duties by Air America. The plan was executed, with departures beginning in September and accelerating in October. Functions required to maintain operational capability were staffed with the minimum number of Marines until the very end. Some Marines assigned to the aviation maintenance section, as noted above, remained until the middle of October. Communications circuits remained open, and responsibility for the camp's internal phone system was not passed to Air America until late October. Other Marines remained, as required, until on 26 October 1961 the last remaining Marines departed Udorn.

It would not be long, however, before Marines in greater numbers returned to Thailand. In early 1962, greatly increased fighting broke out in Laos, with the very real threat that hostilities would spill across the border into Thailand. To ensure the territorial integrity of Thailand and to block the spread of Communism in Southeast Asia, the Marines returned to Thailand in Marine Expeditionary Unit strength. Marine involvement in Southeast Asia had begun in earnest.

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## Endnotes

- <sup>1</sup> Unless otherwise noted, the material in this monograph was derived from: MABS-16 (Rein) After Action Report "Report of Operation Millpond, Udorn, Thailand, March-October 1961, MABS-16 (Rein) dated 2 November 1961," hereafter MABS-16 AAR. This document can be found at the National Archives, RG127, Box 85, #19.
- <sup>2</sup> Robert H. Whitlow (Capt. USMCR), *U.S. Marines in Vietnam – The Advisory & Combat Assistance Era, 1954-1964* (Washington: History and Museums Division, Headquarters, U.S. Marine Corps, 1977).
- <sup>3</sup> Bryan Doody, "Adm. Felt, Gen. Phoumi Confer on Laos," *Washington Post*, 31 March 1961, A6, and Edgar E. Clark, "U.S. Marines Fly Laotians Into a Battle," *New York Herald Tribune*, 7 April 1961, 17.
- <sup>4</sup> Tactical training for the Laotian Army was still being provided by French advisors.
- <sup>5</sup> "Laos — Americans at Work," *Time*, 7 April 1961, 26.
- <sup>6</sup> *Ibid.*
- <sup>7</sup> John Roderick, "Laos Rebels Fire on U.S. Planes," *Washington Post*, 10 April 1961, A1.
- <sup>8</sup> MABS-16 AAR, p.1, encl 1.
- <sup>9</sup> *Ibid.*

- <sup>10</sup> Ibid.
- <sup>11</sup> "Laos Drops Paratroop Force to Cut Off a Rebel Spearhead," *New York Times*, 6 April 1961, C9.
- <sup>12</sup> MABS-16 AAR, p. 3, encl. 1, and "Americans at Work," *Time*, 7 April 1961, 26.
- <sup>13</sup> MABS-16 AAR, p. 3, encl. 1. Page 5 of enclosure 1 states that the helicopters arrived on 28 March.
- <sup>14</sup> Personal observation by the author. On 6 April 1961, the *New York Times* reported that the helicopters in use in Laos had been "recently delivered by United States Marines." "Laos Drops Paratroop Force to Cut Off a Rebel Spearhead," *New York Times*, 6 April 1961, C9. This article also notes that "transport aircraft" were also delivered "to be piloted by Chinese Nationalists or American employees of Air America." Although there is no record that these transports were maintained by the Marines at Udorn, they frequently landed at the Udorn airfield and occasionally displayed combat damage.
- <sup>15</sup> The author was then a private first class, telephone-teletype repairman assigned to the Comm. Det, 3d MarDiv. He arrived on one of the first aircraft to land at Udorn and remained until 18 October 1961, being one of the last Marines to depart.
- <sup>16</sup> Crosby S. Noyes, "Marines in Thailand Tight-Lipped but Alert," *Evening Star*, 25 March 1961, 1.
- <sup>17</sup> Ibid.
- <sup>18</sup> Ibid.
- <sup>19</sup> Edgar E. Clark, "U.S. Marines Fly Laotians Into a Battle," *New York Herald Tribune*, 7 April 1961, 17.
- <sup>20</sup> "Americans at Work," *Time*, 7 April 1961, 26.
- <sup>21</sup> MABS-16 AAR, encl. 2, p. 1.
- <sup>22</sup> Ibid.
- <sup>23</sup> Ibid., encl. 8, p. 3.
- <sup>24</sup> Ibid., pp. 5-6.
- <sup>25</sup> Initially, circuits were established between Udorn and the Marine commands on Okinawa and Iwakuni, Japan. These were soon disestablished in favor of shorter circuits. Message traffic from Udorn to Bangkok and NavComPacPhil was forwarded to its intended recipients from Bangkok and the Philippines.
- <sup>26</sup> MABS-16, AAR, encl. 7, pp. 2-3.
- <sup>27</sup> Ibid., encl. 8, p. 1.
- <sup>28</sup> Ibid., app. 1, p. 4.



# Appendix

HEADQUARTERS  
3d Marine Division (Rein), FMF  
c/o Fleet Post Office  
San Francisco, California

7B/OW/jcj  
1320.3  
Ser: 295  
22 March 1961

## Original Orders

From: Commanding General  
To: 1stLt John F. O'BRIEN 075968/2502 USMC  
(Headquarters Battalion)

Subj: Temporary additional duty; Group Travel Orders

Ref: (a) Para 8002.2, MARCORMAN  
(b) Para 4100, J. T. R.

Encl: (1) Roster of Personnel

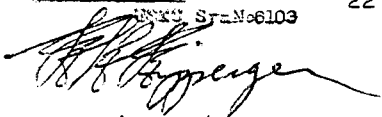
1. In accordance with the authority contained in reference (a), on or about 22 March 1961 you will take charge of the personnel listed in enclosure (1) and report to the Commanding Officer, Marine Air Base Squadron-16 for temporary additional duty in connection with Marine Corps matters and such other temporary additional duty as the Commanding Officer of that Squadron may direct for a period of about sixteen (16) weeks. Upon completion and when directed by proper authority, you will return to your parent organization and resume your regular duties.
2. This temporary additional duty involves participation in field duty as defined in SECNAV Instruction 7220.24A. The Commanding Officer, Marine Air Base Squadron-16 is requested to indicate by endorsement hereon the time spent by you and the personnel in your charge in a field duty status.
3. You are directed to inform your Commanding Officer of the time and date of your departure. Upon completion of this temporary additional duty you will, within twenty-four hours, report the hour and date of return to your Commanding Officer.
4. You are directed to effect immunization and inoculation requirements in accordance with BUMED Instruction 6230.1B and to have in your possession your immunization card at all times during this period of temporary additional duty.
5. These orders are designated Group Travel Orders within the purview of reference (b). You are hereby designated Officer-in-Charge. Should it become necessary for personnel in your charge to travel separately, a copy of these orders countersigned by you will constitute original orders for the

at: O, 3dMarDivReim, ...  
I certify that I have paid  
**11 SEP 1962**  
DOY# \_\_\_\_\_  
MILNARR: \_\_\_\_\_  
PER DIEM: ~~244.6~~ 279.45  
ACTIVITY: \_\_\_\_\_  
APPROVED ON \_\_\_\_\_  
RE: [unclear]

7B/OW/jcj  
1320.3  
Ser: 295  
22 March 1961

# Original Orders

individual concerned.



6. If an emergency leave requirement occurs, you are directed to have the Commanding Officer, Marine Air Base Squadron-16 contact this Headquarters by message for appropriation data and travel order number for each case. This request will contain the individual's name, rank and service number. Five copies of orders issued will be sent to this Headquarters.

7. Individual equipment and T/O weapons will accompany each individual.

8. Expenditures incurred under these orders are chargeable to appropriation 1711106.2710, O&MMC-61, TO #1397-61 for travel prior to 1Jul61, 1721106.2710, O&MMC-62, TO #4-62 for travel subsequent to 30Jun61, OC 022/Off Tvl, 023/Enl Tvl, EAN 85011, MIN 67360, BCAN 67400, BCN 11031. You are directed to report to the disbursing officer within seventy-two hours of your return for financial settlement of these orders. Estimated cost of per diem is \$38.00.

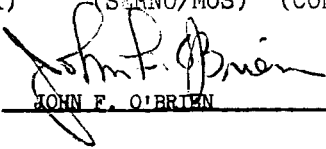
DONALD M. WELLER

Copy to:  
CO HqBn-5; DivDisB; DPI; DivOW-3; DivLocator; DivPostalO;  
F I L E

FIRST ENDORSEMENT -----

1. These orders constitute original orders of:

<u>George R. HOFFMAN, JR.</u>	<u>PFC</u>	<u>1857772/2639</u>	<u>USMC</u>
(NAME)	(RANK)	(SERNO/MOS)	(COMP)

COUNTERSIGNED:   
JOHN F. O'BRIEN

# Original Orders

ROSTER OF PERSONNEL

<u>NAME</u>	<u>RANK</u>	<u>SERNO/MOS</u>
AMYX, Lindberg	GySgt E6	XXXXXXXX/XXXX
ABRAZEK, Ronald G.	Cpl	XXXXXXXX/XXXX
BANKERS, Eugene E.	Cpl	XXXXXXXX/XXXX
CAMPBELL, Charles L.	Cpl	XXXXXXXX/XXXX
ANDERSON, James B.	LCpl	XXXXXXXX/XXXX
LITTLE, Larry A.	LCpl	XXXXXXXX/XXXX
MORICZ, Raymond J.	LCpl	XXXXXXXX/XXXX
BELL, Ferris. L.	Pfc	XXXXXXXX/XXXX
BONACCI, Russel P.	Pfc	XXXXXXXX/XXXX
BOYER, Robert J.	Pfc	XXXXXXXX/XXXX
BUTLER, Warren W.	Pfc	XXXXXXXX/XXXX
CECIL, Joseph K.	Pfc	XXXXXXXX/XXXX
HOFFMAN, George R. Jr.	Pfc	XXXXXXXX/XXXX
KOHLER, John M.	Pfc	XXXXXXXX/XXXX
LARSON, Joey S.	Pfc	XXXXXXXX/XXXX
MARSON, John C. III	Pfc	XXXXXXXX/XXXX
MCINTYRE, Radnull D.	Pfc	XXXXXXXX/XXXX
POWELL, Bruce	Pfc	XXXXXXXX/XXXX

ENCLOSURE (1)

*The device reproduced on the back cover is the oldest military insignia in continuous use in the United States. It first appeared, as shown here (without the History Division text), on Marine Corps buttons adopted in 1804. With the stars changed to five points, this device is still in use on Marine Corps buttons.*

*Layout and design by Vincent J. Martinez, U.S. Marine Corps History Division, Editing & Design.*

