

RESUME OF SERVICE CAREER

Of

AARON LUCURGUS LILLEY, JR., Major General

DATE AND PLACE OF BIRTH: 7 May 1933, Gatesville, North Carolina

YEARS OF ACTIVE COMMISSIONED SERVICE: Over 31 years

DATE OF RETIREMENT: 1 November 1985

MILITARY SCHOOLS ATTENDED

The Transportation School, Advanced Course
The Command and General Staff College
The Industrial College of the Armed Forces
The Quartermaster School, Logistics Executive Development Course

EDUCATIONAL DEGREES

St. Benedicts College - BS Degree - Business Administration
Florida Institute of Technology - MS Degree - Contract and Procurement

CHRONOLOGICAL RECORD OF DUTY ASSIGNMENTS (Last 10 Years)

<u>FROM</u>	<u>TO</u>	<u>ASSIGNMENTS</u>
Dec 68	Jun 70	CO, 1 st Trans BN (USNS Corpus Christi Bay), USARV
Aug 70	Dec 70	Student, Log Exec Dev Crse (LEDC)
Dec 70	May 72	Aviation Programs Officer, DCSLOG, DA
Aug 72	Jun 73	Student, Industrial College of the Armed Forces
Jun 73	Dec 73	Student, Florida Institute of Technology
Dec 73	May 75	Strat Mob and Pol Div Chief, DCSLOG, DA
Jun 75	Feb 77	CO, DISCOM, 1 st Cav Div
Feb 77	Sep 78	DCSLOG, HQ, 1 st Army
Sep 78	Aug 79	Dep CG, TSARCOM
Aug 79	Aug 80	J-4, USREDCOM

Aug 80	Jun 82	DCSLOG, FORSCOM
Jul 82	Jun 83	ACSLOG, HQ, DA
Jun 83	Aug 85	CG, Fort Eustis

PROMOTIONS

DATES OF APPOINTMENT

2LT	4 May	1954
1LT	4 Nov	1955
CPT	29 Jul	1960
MAJ	4 Aug	1964
LTC	11 Dec	1867
COL	1 Jan	1974
BG	1 Jan	1978
MG	1 Jan	1982

US DECORATIONS AND BADGES

Legion of Merit w/Oak Leaf Cluster
 Distinguished Flying Cross
 Bronze Star Medal w/2 Oak Leaf Clusters
 Meritorious Service Medal
 Air Medal w/4 Awards
 Army Commendation Medal w/Oak Leaf Cluster
 Master Army Aviator Badge
 Army Staff Identification Badge

SOURCE OF COMMISSION OCS



INTERVIEW ABSTRACT

Interview with MG (Ret) Aaron L. Lilley, Jr.

MG (Ret) Aaron L. Lilley, Jr., was interviewed by CPT Bobbi Jo Wells on 19 February 1986.

The topic of discussion was **MG Lilley's** experiences while in command of the 1st Transportation Battalion aboard the U.S. Navy Corpus Christi Bay in Vietnam from December 1968 to June 1970.

MG Lilley detailed the varied mission of the 1st Battalion in support of Army aircraft in Vietnam. He discussed the many advantages of the Floating Aircraft Maintenance Facility (FAMF) in support of aircraft maintenance in a theatre of operations. In addition, he outlined the shipboard operations and the additional training required for all of his personnel. He also discussed how the 1st Battalion enjoyed extensive support through the supply system that linked them with the factory at Corpus Christi, Texas.

MG Lilley discussed the close relationship between his personnel and the ship's crew, all of whom were experienced and extremely professional.

Finally, **MG Lilley** discussed the personal and professional rewards derived from command of the 1st Battalion and the effectiveness of similar operations in support of today's battlefield.

INTERVIEW

This is the Army Transportation Oral History interview conducted with MG (Ret) Aaron L. Lilley, Jr., on 19 February 1986 by CPT Bobbi Jo Wells.

CPT Wells: From December 1968 to June 1970, you commanded the 1st Battalion aboard the U.S. Navy's Corpus Christi Bay in Vietnam. Could you elaborate on the mission of the 1st Battalion?

MG Lilley: The 1st Battalion had two missions because there were two battalions. The first was the training battalion located at Corpus Christi, Texas, whose mission was to train all the personnel who would deploy to Vietnam for ultimate duty aboard ship. The second battalion was the 1st Transportation Battalion Seaborne, whose duty station

was aboard the ship. The mission of the Corpus Christi was to provide aviation maintenance support to the units that were deployed in Vietnam. The primary mission, if you get down to specifics, was to provide contact teams ashore when they were needed to work on aircraft as a whole. Aboard ship, we primarily worked on the components, the engines and transmissions. The components for all of the helicopters in Vietnam were repaired aboard the ship. The idea here was that the space constraints aboard the ship would help to turn around as many of the unserviceable components as possible, in country, put them back serviceable into the supply system, and reduce the pipeline and the cost of the pipeline in terms of transportation as well as the additional components that we would need. The battalion's unspoken or unwritten mission, if you will, was to respond immediately to urgent requirements within Vietnam so that if a component was grounding aircraft, we could shift our emphasis to the component(s) in question in order to maintain maximum readiness in Vietnam for that particular aircraft at that time. So, our mission was continuously shifting back and forth in terms of emphasis given to the components that we were repairing. Because of the requirement to turn around the greatest possible number of repair parts or components in country, we went through the components, surveyed them, and selected those that required the least amount of repair so that, with the capability that we had, we could maximize the number of components that we could turn around. We then sent the components that required the greatest amount of work back to the States and we kept the ones that we could turn around the most rapidly.

CPT Wells: . . . and did this operation evolve at depot level?

MG Lilley: It was almost all at depot level. We did a lot of work that was below depot level, but we were a full depot. We were managed and funded as a depot and had all of the same work requirements and inspection standards of a full-fledged depot. In fact, with many of the components, we were the only facility other than the factory that could perform full overhauls. We had the test cells aboard ship to do full overhauls for turbine engines, main transmissions, gear boxes, instruments--everything, a full depot.

CPT Wells: Did you use a lot of test equipment? Was this one of the primary or first uses of a lot of test equipment for components?

MG Lilley: We had the largest array of test equipment in Vietnam. It was not the first time that that much test equipment had been deployed because we had a depot located at permanent facilities in Coleman Barracks, Germany, which developed the same capability. However, this facility was not mobile like the Corpus Christi Bay. So, you can say that this was the first time that we had put that much test equipment in a facility that was mobile.

CPT Wells: Was this the only seaborne maintenance unit?

MG Lilley: Yes. Now, the history of the floating maintenance facility goes back to World War II. There was a big fight between the Army (then the Army/ Air Force) and the Navy over the need for a floating aircraft repair facility. After a great deal of debating among

themselves, they came up with, I believe, three ships. These ships were used in the Pacific when we were island hopping. Before we could get a facility ashore, we were going to another island. So they put these repair facilities aboard these small ships that were converted for it and they would island hop with the invasion force and were very successful. After the end of World War II, there was no need for them and they were all dismantled and done away with because no one saw the need for that type of thing in the future. In Korea, we did not have a need for them; or if we did, it had such a low priority that no one ever resurrected the concept and the facility that we are talking about here was resurrected in the early '60s. The Corpus Christi was taken out of the James River Fleet right here off of Fort Eustis. It was the U.S.S. Albemarle and it was taken down to Charleston, I believe, and converted and renamed Corpus Christi. So the Corpus Christi Bay was a converted WWII seaplane tender. Then there was a plan in the late '60s and early '70s for a floating aircraft maintenance facility, number two, which consisted of a small aircraft carrier, an escort carrier, with a hanger built on the flight deck. That was considered to be cost prohibitive at the time and the idea was dropped. When the Corpus Christi came back at the end of Vietnam, it deployed to the South Pacific and got in a storm that cracked the hull. When it came back from that deployment, it was decided that the amount of repair needed and the condition of the ship was such that it did not warrant repairing. So, the ship was taken out of the fleet and subsequently scrapped. There is a plan to resurrect it now with the project Arapaho that is the building of a modular facility aboard a container ship. The advantage of the Arapaho over the floating aircraft maintenance facility that we know as the Corpus Christi Bay is that it could be taken off the ship, moved shore, and set up as a complete self-sustaining facility to do Aviation Unit Maintenance (AVUM), Aviation Intermediate Maintenance (AVIM), and selected depot work.

CPT Wells: Did you support a specific number of aviation units or was it based on demand?

MG Lilley: We supported all of the aircraft units in Vietnam and set up an annual program based on the demand from the 34th Group; they told us what they needed in terms of components and we programmed those components and called for the repair parts. We got all of our repair parts support, incidentally, through the depot in Corpus Christi, Texas, so we were able to enjoy a very high priority on repair parts to get the components turned around and back in country. But that program was only a point of departure and we had the authority to change our program to meet the demands in country. So, if we were planning on doing 25 gear boxes for the year but gear boxes of that particular type turned out to be a problem within Vietnam, we would do as many as we had to do in order to keep the units supplied. So it was a response to the theater needs, not to any individual units. We supported all of the direct-support, general support units and the units themselves if they had a problem.

CPT Wells: Was the 34th Group your higher headquarters?

MG Lilley: The 34th Group was our higher headquarters.

CPT Wells: I'd like to talk a little bit now about the 1st Battalion's capabilities and, specifically, how it was used in support of emergency demands.

MG Lilley: Let me first explain the role that the battalion played aboard ship. The ship had two distinct crew elements. It had a civilian merchant seaman crew that consisted of 129 people as I recall. They ran the ship. They had the engine room and the bridge, and they took care of the ship watches. When we moved, they moved the ship. Then the battalion, the Army battalion, had an authorized strength of some 365 personnel. That group of people performed the maintenance mission of the battalion and they were organized just as a depot would be in the shops. Each individual shop had its own repair parts listing, program and production, and was responsible for keeping the shop open on a 24-hour basis, seven days a week. So the shop ran for around-the-clock operation. When we had a problem with a part or a component, we would first find out from 34th Group -- from the Materiel Management Center (the MMC). The 34th Group would normally contact our production control and tell us that they were short or could foresee a problem in a particular component. At that point in time, we would check, and we had a computer on board by the way, to make sure all of our supplies were available. (Supply was automated in '69.) So we checked the computer immediately to see whether or not we had enough repair parts on board to satisfy the repair of the components that were needed. If we did not, we then would call Corpus Christi. We had radio communications with Corpus Christi or we could send them a message and ask them to forward the necessary repair parts. Now, they could do one of two things. They could either pull from stock, if they had it, or they could pull from their production line because they were overhauling the same components that we were. If those repair parts were extremely high priority, they would put them on the 141s (C-141 Air Force Transport) or the C-5s (Galaxy P-25) that were bringing the aircraft. You see, the aircraft were being rotated back from Vietnam to Corpus Christi and back again on SAM (a Special Air Mission) aircraft. Those aircraft normally were cubed out because the aircraft did gross out. So if you had 300 to 400 pounds, or 1,000 pounds of repair parts, they could be put on that aircraft. We would know the tail number of the aircraft and when it was going to arrive at Tan Sun Nhut or Bien Hoa and have someone there to pick up the aircraft parts and bring them directly to the ship. So I could have repair parts sometimes in less than 48 hours from the time I asked for it from CONUS (Continental United States)--depending on when the flight was leaving and when I made the phone call.

CPT Wells: So you had, in reality, your own stovepipe repair parts system.

MG Lilley: Yes. The only time I depended on Vietnam was when the aircraft repair part was very critical and the 34th Group had it in stock and I could use it right then. At that point, I'd get it from them rather than waiting the 48 hours to get it from CONUS, but those times were very rare.

CPT Wells: Were there problems that occurred because of maritime crewmen were on board with the Army personnel?

MG Lilley: No, we had no problem in that area. We had a very clear understanding that the two people in charge, who would have been the captain of the ship and commanded the 129 merchant seamen and the battalion commander, had to get along in order to make this lash-up work. The battalion commander, my particular position, performed double duty with the additional title of facility commander. This arrangement meant that the captain of the ship worked for me, if you will, but only in terms of my telling him where I needed to go to accomplish my mission. So an example of that would be that I would tell the ship's captain that I wanted to move from Vung Tau to Qui Nohn and I wanted to be in Qui Nohn at eight o'clock tomorrow morning and he would tell me what time he wanted to pull anchor in order to be there at eight o'clock tomorrow morning. From there on, the staffs would plan when we would secure ship, all the things that had to be done to get underway. He would be responsible for getting us there, but the facility commander was in charge. However, if the commander wants to go somewhere that would be unsafe..... if I wanted to go into a harbor shallow enough to cause us to run aground..... the ship's captain could refuse the mission. But that was not a problem and I know of no problems that we had between the military and the merchant crews quite to the contrary. We all worked together to get the mission accomplished.

CPT Wells: Were the crewmen quite a bit older than the military personnel?

MG Lilley: Oh, yes. In fact, most of the crewmen--I'd say 90 percent of the crewmen--were as old or older than the oldest officers and NCOs (non-commissioned officers) in the battalion.

CPT Wells: I imagine that would have helped a lot with experience.

MG Lilley: It did. It helped a lot--especially in terms of safety. When you take a bunch of soldiers who have never been aboard ship and you put them aboard ship, you have a lot of safety considerations that you normally don't think of on dry land. Fire aboard ship is a very serious thing--much more serious than a fire in a building here at Fort Eustis where you can get everybody out of the building and fight the fire. You can't do that aboard ship, you've got to fight it from the inside of the building so to speak. If something happened, if you hit a mine for instance, you had the people that were trained to do damage control aboard ship. We had damage control teams. So our people had to go through a lot of special training other than just learning to be mechanics and technicians.

CPT Wells: Was that training conducted there on the ship?

MG Lilley: No, they all had to be trained before we went aboard ship in damage control and in firefighting. We had special schools we sent people to for that and then when we went aboard ship, we had drills. We'd have man overboard drills, simulated fires and other simulated situations where the battle damage repair teams would go in with the timbers and shore up a bulkhead and use all the techniques to do that sort of thing.

CPT Wells: Ok, sir. I'd like to talk now, if we can, about the support of emergency demands. Did they move the Corpus Christi based on what aircraft was being downed in what area? Was that how the ability came in?

MG Lilley: No. I think the best way to answer that would be to give you a sequence of events of what the Corpus Christi did and how it was used. When it first went in country, it went to Cam Rahn Bay because that was the largest harbor facility at the time and was fairly centrally located. The ship stayed in Cameron Bay for quite a long time and then moved from Cam Rahn Bay to Vung Tau and operated about a mile off the coast of Vung Tau. The primary reason for moving it from Cam Rahn to Vung Tau was because of the close proximity to 34th Group for communications, for liaison back and forth and for transporting the repair parts back to the depot (the main depot was in Saigon) so that they could be issued from there to all the units in the country. At one time when the Cav (Cavalry) came in country because of the large number of aircraft being introduced immediately, the ship roved to Qui Nohn and operated off the coast of Qui Nohn and supported Cav as it was moving forward to the plateau, the flat country. Then the ship roved back to its former location. In late '69, from late '69 to mid '70, we developed a plan where we would move every three or four months from Vung Tau up to Qui Nohn then to Da Nang and back. We could get to Qui Nohn overnight, so we'd leave late in the afternoon and be there in the morning. We would take all the repair parts that were destined for Qui Nohn, carry them up and have them airlifted to shore usually by Chinook. We'd already have them ready in the nets and they'd just take them ashore. That cut down on the amount of airlift that they had at those particular times. Then, we would retrograde out of Qui Nohn all of the unserviceables that they had, then go to Da Nang and do the same thing. When we would go back to Vung Tau, we would go through all those irreparables, take the ones that we could repair or that we wanted to repair and put the rest of them in the pipeline to be retrograded out to CONUS.

CPT Wells: Now, I'd like to talk about personnel. I believe you mentioned briefly the civilian contract workers on this part of the front. Were they used primarily for specific technical work that was needed?

MG Lilley: The civilians were used totally, 100 percent, for the operation of the ship itself. The engineer, for example, operated the engine room and the first and second mates pulled watch on the bridge. (The bridge has to be manned 24 hours a day.) So the civilian people who were manning the ship were for the ship itself and had nothing to do with the Army mission. They were there to see to it that the lights were on, the water was running and the ship was making fresh water for us. If we got ready to get underway, they were the ones who had anchor detail. Except for a support role, they had nothing to do with repair of any of the components-nothing to do with the mission at all.

CPT Wells: I read that there was a huge shortage and a large turnover of military personnel, of course, in Vietnam. How did this affect operation of the 1st Battalion?

MG Lilley: 1st Battalion probably suffered less from that than any of the other units in Vietnam because of the way the system was designed. First of all, we had all the orders over stamped with "Project Flattop" and all personnel centers in country were keenly aware of that. If you came into Vietnam and got out of the pipeline in some way, when they saw your Project Flattop orders, they would call the ship and say, "I've got CPT Wells here and her orders are stamped Project Flattop." They would hold you and we would come and get you to get you back aboard the ship or back in the right unit. The people who came aboard ship first went to Corpus Christi and, hopefully, spent a year in Corpus Christi. The primary reason for that was for them to learn the system, the depot system. If they were in supply, they went to learn the people who would be supporting them and develop relationships with them while they were there as well. They went right into depot and worked with the people. There was a formal training program funded for the depot to do this. The technicians who were in the hydraulic shop worked in the hydraulic shop at Corpus Christi and learned to overhaul the components. You see, we did not have, and still do not have, a skill identifier for a technician who's functioning at the depot overhaul level and you don't do depot overhaul in an AVIM company. So you've got a person in whom you've invested a lot of extra time and money overhauling gear boxes, actuators, or servos. If you lost that person back into the system and they went back into a DS (Direct Support) or GS (General Support) company, they'd have a skill that they'd never use again. We never were able to get a skill identifier for them so we tracked them in the personnel system by name. At the end of the tour in Vietnam, if the person wanted to stay with Project Flattop and make a career of the Army or thought they were at that point in time, there was a tremendous incentive to stay with Project Flattop because we had more rank in that battalion than you would ever see again simply because of the skill. We were very top heavy in E-5s and above. Many people came in as privates in Project Flattop and went out as master sergeants and some of them as sergeant majors as a result of having stayed with it the entire time. When they did leave the ship, they went back to Corpus Christi. They would go back into the training program and could either be cross-trained in other MOSs or trained on additional components they had not been exposed to during their first tours. By the time you got your second tour through, or maybe even before you finished, you'd be in a supervisory position and were already prepared for that. By then you had a very good relationship with the people you were supporting back in Corpus Christi. So you developed a real close dialogue with the civilians on the production line who were doing the very same thing you were doing. A lot of correspondence took place between the people aboard the ship and the people in Corpus Christi. In fact, Corpus Christi probably has 100 or more people retired in the area now who were crew members who stayed there as a result of their families being there and they would go to Vietnam and stay a year and come back and some of them didn't stay in Corpus Christi even a year before they rotated back. A lot of them volunteered to go back, especially the ones who did not have families because they got more pay. They got combat pay for being in Vietnam but they were aboard the ship so they had the best of both worlds.

CPT Wells: I can see where all these factors would contribute to less personnel problems for the battalion.

MG Lilley: Very few personnel problems. Very few Article 15s. Back in those days when we had all the racial discrimination and the arm bands and all this, it just didn't exist aboard the ship. You've got to understand too though, that because of the schooling that we were putting them through, most of the people we had were very high quality people with an awful lot of personal pride in their product. So you had a very tight knit group. Just living aboard ship made it a tighter knit group than it would have been if they were on the beach and could go their own way. Three hundred and sixty-five feet was the farthest you could get from them.

CPT Wells: In my research I noticed that you stocked somewhere around 17,000 line items.

MG Lilley: We got up to 22,000. That was about our high--22,000.

CPT Wells: How did you store those items?

MG Lilley: They were stored in the hold of the ship. There were special compartments in the hold of the ship that were designed with the storage cabinets built into them -- some of them very, very deep down in the ship. All those storage locations were in the computer and the requisitions would be run through the cycle in the computer. Then, you pulled them just like you did in the depots and delivered them to the shops.

CPT Wells: I see. I also read that, in addition to the automated system that you used, you had television monitors in the shops that you could (I hope I'm referring this to the right information) flash special fabrication information from one shop to another.

MG Lilley: No, that's not quite right. We did have a capability for fabrication. We had our own data library that had 35mm aperture cards. If you came aboard and you wanted something made and you didn't know what the specifications were, we could go to the data library and find it, print the blueprints, and take them to the shop or give you the blueprints if you wanted to go back home and make it. That was a very large capability; the only one in country. We also had a duplicate of the library in Corpus Christi. It was huge. It was as big as the room that we're in now so it was about 20 to 30 feet square, at least, with the big machines in it. You can imagine each drawing was a machine card with a 35mm aperture in it. You'd take it out and put it in the printer and it would give you a full size drawing. We did not have television monitoring in the shops as you described. What we did have was a communications system with every shop on a squawk box system so that production control could talk to everyone involved simultaneously. For example, when we got the call from 34th Group that said, "We need 25 gear boxes as fast as you can get them for us;" the commander, production control, supply, the shop involved, all of us, could talk on the squawk box and have a conference call and whoever took the call from Group could tell everyone what the requirement was. Everybody could go out and say, "Yes, we've got enough unserviceables. Yes, we've got everything but this one part and we can only do six until we get the rest of them. Then let's get on the phone and get the rest of them from Corpus Christi." So you'd do the whole thing in a matter of minutes and call the Group

back and say, "Yes, we can do it" and you were functioning. If you needed the blueprints, then tech data would be printing them for you at some time.

CPT Wells: I see. I also got the impression from my research that fabrication was considered one of the most important missions of the 1st Battalion.

MG Lilley: That's right. The Corpus Christi had the largest machine shop, the heaviest machine shop capability in Vietnam. We had the largest machines--milling machines, lathes, presses--in Vietnam. We also had the largest heat treating ovens for heat treating the metal. Sometimes, after you've worked the metal, it has to be heat treated to reconstitute the strength. We had the largest heat treating ovens and we had the largest machines in the hydraulic shop for making hydraulic tubing and fuel lines and things like that. In fact, we made some of the fuel lines and hydraulic lines and kept them in stock. There was such a demand for them, that we just kept them in stock so that when people came in and needed these very high turnover lines, we could give them to them and not have to wait and manufacture them; we always kept them in stock. I might add that this large fabrication capability supported a lot of systems other than aircraft. We did a lot of manufacturing for the ordnance people, for both weapons and vehicles. We also did all the fabrication for the air-cushion vehicles that were down in the Delta and that's the only thing that kept the air-cushion vehicles going. There were so few of them, there were not enough repair parts in the system. We would just make the things that they needed.

CPT Wells: I'd like to shift again, to the concept of the operation. Throughout my research, it occurred to me that a facility such as this, of course, could have been established on land. So what was the advantage of being seaborne?

MG Lilley: The advantage of being seaborne is the mobility. More than 60 percent of the earth's surface is covered with water. So, you can get anywhere on the earth by sea--except the steaming time. There's a time-distance problem but you can get there. Then, when you drop anchor, you're operational. The unit is fully operational when it arrives. They can do some work en route depending on how rough the sea is. But the idea is that, as long as it's aboard ship and you need it as they used in Vietnam for the Cav when it went through, it can go to the point that's nearest where it's needed and reduce the pipeline. An example of how it could have been used for an operation that you will remember occurred when we were in Honduras. A seaborne facility could easily have been off the coast of Honduras providing aircraft maintenance support for the units that went there. If the ship had have been employed off the coast of Honduras, it could have provided all the repair parts support for them or maintenance support and been a facility that would not have counted for the people in country. You may also remember, in Honduras, we could have no more than a certain number of people in country. There was a ceiling on the number of U.S. personnel who could be in country. So, this could be a facility that was off-shore providing very punctual support.

CPT Wells: Is this something the Army should be doing, not just during times of conflict but maybe all the time so that those personnel can be trained right now and ready to go?

MG Lilley: I, personally, think so. I think that the Arapaho, that we mentioned earlier, is a step forward towards perpetuating or resurrecting this concept now and there seems to be enough interest in it that it should fly and be purchased. The frustrating thing about it is that we proved the concept works for aviation. However, we don't seem to be able to get anyone interested in it other than in the aviation arena. If you stop and apply common sense to the concept, it would apply to anything that you want to supply support to and reduce the pipeline. It lends itself to rapid turn around of components, especially those components that require a lot of technology and a very small place to repair them. So, any radios, fire controls for our tanks (the Bradley or whatever), or the turbine engines for the M-1 could all be serviced in this type of facility. If we can do turbine engines aboard ship for aircraft, we ought to be able to do the turbine engines for the M-1. Any of the components that can be repaired in a fairly small area-I'm talking about physical layout now--that are not all that bulky, it would appear to me that we could do it. The concept lends itself perfectly to a medical facility. In the Arapaho, for example, if you wanted to have one landing pad instead of two; you could convert that hanger into a hospital complex. It would have solid containers that you could walk back and forth through and have operating rooms and wards. You're only limited by your imagination and the budget on what YOU can do. If we go the Arapaho route (which I hope the Army will) the plan now would be to give the Arapaho facility (the AVIM facility) to a National Guard unit, take one of the aviation maintenance units and reorganize the unit to fit whatever mission the Army decides to give it. I would move it to the home station, or a part of it to the home station, of the National Guard unit so that they could train on it every time that they go to their monthly meetings. Corpus Christi, which does a lot of planning with the National Guard now, would be an ideal training base. When they go on their annual training, then maybe take it and put it aboard ship and let it support one of the joint exercises off California or the coast of Washington when they have the joint exercises at Fort Lewis or even support off the east coast when they're having them at Fort Drum or Fort Story. In this way, they can exercise in real world peacetime what they can do during wartime. The depot skills we put aboard, the more those people that I talked to you about have to be trained. We have to have a training program for those people. Then, we have to have a continuing training program for them so that the skill doesn't deteriorate. We train you and then five years later we ask you to do the same thing at the production paces we trained you for and, in the meantime, you haven't had the opportunity to do it. But that's not all a loss because every time you repair a component in the training environment, even in peacetime, it's going to go back into the system as a serviceable component and it's not a loss. It's productive training.

CPT Wells: How extensive and rigid was the doctrine from which the three level of maintenance concept emerged? Was what they were telling you, you should do at depot level?

MG Lilley: I had the flexibility to do anything I wanted and had the capability to do. If I didn't have the capability to do it and I wanted to develop the capability, I would get in contact with Corpus Christi, which was the Group headquarters I reported to back in CONUS. I reported to two bosses. I reported to my command headquarters which was in Corpus Christi, the material group, and then I was under the operational control (from a mission point of view) of 34th Group in Vietnam. So, I was subordinate to them. If 34th Group wanted something that I did not have the capability to do, I would go back to 1st Material Group in Corpus Christi and let them know what I needed. If I needed skills or additional special or test equipment and technical advice, I would get in touch with St. Louis and they would send out the technical civilians long enough to train the people or to ensure that we were doing it right. This training gave everybody peace of mind because we worried about keeping the aircraft flying. For example, if we got a component in that needed an adjustment that could have been done at GS level, we made the adjustment, put it on the test stand and sent it back -- like fuel control. It may not have needed disassembly at all. It may have only needed minor adjustments and could be put right back in the container and sent back to the supply system.

CPT Wells: It would seem to me that, if the intelligence were good for the North Vietnamese, the Corpus Christi would have been a prime target for their enemy activity. Were there special security requirements?

MG Lilley: That was one of the underlying factors in deciding to keep the ship anchored. By staying at anchor about a mile off the coast, we put ourselves at the very extreme range fans of the mortars that we knew that the North Vietnamese had. So, if they got a hit on us, it would be by accident. Pinpoint accuracy at that range was almost out of the question. Had they come in with something heavier and it was to the point that it would have been with pinpoint accuracy, we probably would have anchored further off shore. There are several security requirements. In every harbor, you have a harbor patrol to provide water security. They're the ones who are supposed to be watching for the swimmers and the sappers and things like that. You have to have air superiority if they have an air capability--which they did not in that particular case. If you were in a theater where they did have aircraft, you'd have to have air superiority or you would be extremely vulnerable. We knew they had sap team and used them quite extensively (as you probably know), so we kept the waterline of the ship lighted at night to protect ourselves from the sappers. We had lights that extended out over the ship and kept the waterline lighted at night. If the activity was getting high in the geographical area, we would indiscriminately throw concussion grenades over the side at night not for security, but for ballast because when we put all the equipment in the seaplane tender, it became top heavy. I'm sure that the North Vietnamese knew that we did that. It was no secret that we did that and anyone in the water in close proximity of the ship when a concussion grenade went off, didn't fare too well. There was five feet of concrete at the bottom of the Corpus Christi. The bottom was lined from below the waterline down and a lot of the area there was five feet of concrete. So, a satchel charge that a swimmer could carry would have done negligible damage. We would have had to go off-station to have it repaired, but it would not have been a catastrophic problem. It would never

have gone through the concrete. It may have blown a hole in the metal, but it would never have penetrated the concrete. No attempt was made on the ship that we know of.

CPT Wells: There was also some information about the inadequacy of the maintenance records and historical data. How did this affect your operation?

MG Lilley: Not any more than it did in any depot operation. They had the same problem with incomplete and inadequate records ashore that we did back in CONUS where they were getting the components back with lost records and what have you. We probably were at an advantage because we were sometimes in a position to contact units when something showed up without a record. You can look at the tag on the can and tell where it came from and you could sometimes contact a unit and get the record that they had forgotten to put in the can. You have to understand the reason that happened a lot of times is that components were changed out in the field, especially on a downed aircraft, and that component came from there back to a pickup point and then was evacuated out and never went back through where the records were. Sometimes you could get them that way. If you were not able to do it, then there were procedures where you could reconstruct records. It was a problem though, and it always will be a problem in the environment that they were operating in.

CPT Wells: I'd like to talk about some experiences you had while you were in command and what you thought was the most challenging aspect or event or both.

MG Lilley: I think that the two things that highlighted my tour over there were, first of all, establishing the capability to go up and down the coast and continue support from other than in a static location. I initiated going up and down the coast periodically to pick reparables and dropping off cargo which was a very successful operation. That was a good challenge for the unit because we learned to do more while underway. We had never tried to do any work while underway, so we found that we could be productive, though not as productive as at anchor because the ship is moving and there are certain operations that you can't perform. I found it very rewarding to establish a procedure that had not been done before. Secondly, I took command of the ship when it was in dry dock in Sasebo, Japan, and went back to Vietnam in June '69. We had to take the ship back to Japan nine months later to have the bottom cleaned, get the barnacles off and do some minor repairs. It was on a scheduled nine month cycle and was due at that point in time. So, rather than lose the steaming time to and from Japan and when it was in dry dock seven or eight days, we decided we would be productive while en route and while in Japan. We operated en route, installed a single side band radio from the ship in Saigon, and worked the components that they told us by radio that they needed. We then went by Okinawa and launched our own helicopters to go ashore and dropped off all the components that we had repaired for their use. We had coordinated with the Air Force and there was an Air Force aircraft there to take those components right to Tan Sun 1-hut. So, we supported Vietnam while en route to Japan. We continued to do our production even while the ship was in dry dock. We moved components to the shops in an Air Force base in Itizuki and we coordinated with them to use their shops. We ended up splitting the tire in half and operating one shift during the

day. We'd let one shift take R&R (rest and recuperation) and then they came back and the other shift took R&R. But we operated the shops that we could like instrument repair and assembly of hydraulic servos--the things that you could do without the test equipment. Then, when we went back aboard the ship, we did all the testing en route back to Vietnam so that we had several days of production ready when we got there. We proved that we could support the theater while en route and while away from the theater at considerable distances without any appreciable problem at all. They were the two highlights, I think, of the tour--being able to coordinate and support while underway and still feel like you're providing them with the components that they need to keep the fleet going. I suppose the biggest challenge and the most satisfaction though, because it was on a day-to-day basis, was to be able to rapidly respond to the 34th Group in order to maintain the readiness. The ship took a great deal of pride in being able to shift from repairing component A to repairing component B and getting the number needed out. So, I think the challenge of rapid response was probably the

most rewarding because it was a day-to-day thing. It was just a lot of fun.

CPT Wells: Sounds like a very professional group.

MG Lilley: It was. We received a tremendous amount of support from Corpus Christi too. We couldn't have done it without Corpus Christi to back us up. I know they went down to the shops quite often and took the repair parts right off of the production line and shipped them to us. Now that hurt their production, but from an economical point of view for the Army it was, by far, the smartest thing to do. If they had not sent me the bits and pieces, we would have sent the entire component back to Corpus Christi for them to do and loaded up an airplane. By virtue of having that communications network, we enjoyed a tremendous priority on repair parts that no one else had. You know, being able to go into the communications room and talk to Corpus Christi on a radio just like that is much better communications than anybody in country in the 34th Group had back to the States.

CPT Wells: Lastly, I'd like to talk about some lessons learned -- personal and doctrinal -- and if, as a result of this operation, there were any major changes in Army aviation maintenance.

MG Lilley: No, I don't think there were any changes made as a result of the Corpus Christi Bay. I think that it proved that we can do it. It had already been proven before. I think it's unfortunate that we lost the mobile capability with the scrapping of the Corpus Christi and have not been able to generate one back-up until last year with some interest in the Arapaho that we spoke of earlier. If we learned a lesson, we proved without a shadow of a doubt, that a mobile depot of this type has a very economical role to play in the deployment of the force. We've proven that, if we've got a facility that can deploy, it can arrive on station operational. That capability cuts down on the pipeline and, of course, the larger the capability, the greater the payoff in term of fighting. It didn't have anything to do with the changing of the DS unit, DS/GS depot to what you know now as the three level maintenance in aviation. It fits into that very well, but it had

nothing to do with it at all. So, I think that we did not learn our lesson very well because, if we had learned our lesson (as we should have when we decided that the Corpus Christi could not be repaired), we would have gone into the sort of modular deployable concept that we're now playing with some 11 years later. We've let the clock tick by 11 years and we were not pushing the state-of-the-art even then to put these thoughts into a facility. We've sort of let the world pass us by. We've let the budget push us down the road and we've now got the opportunity to do it and if we let this slip by with the budget cuts that we're faced with now, we may never have the opportunity again.

CPT Wells: What about some personal lessons learned?

MG Lilley: From a personal point of view, it was like a college education. I had had a lot of time at sea anyway before that and I was familiar with the operations aboard ship. I was not, however, acquainted with shipboard depot operations, and from that point of view, it was very gratifying. The other thing that it did allow, from a personal point of view, was to let me get to know my people much better than I would have in any other environment. By being aboard the ship 24-hours a day, you were with the people all the time. In your reading, you probably noted that we had a chemist, a metallurgist and an engineer. We did crash damage analysis that no one in the Army gets involved in to any degree outside of the depots. We did our own work right aboard ship, so I was able to spend a great deal of time with the chemist and the metallurgist and learn how to identify this kind of fraction and that kind of fraction under the microscope and watch the chemists do their things. From a big pile of rubble that was an engine or a transmission, you can find exactly what failed by continuing to sift through it. Very, very interesting. So, from a personal point of view and from a management point of view, I learned a lot. With the changing priorities and the rapid decision-making, I suppose I also learned that if you're faced with a fluid situation, the one thing you have to do is make a decision. You have to keep making the decisions one right behind the other because, every time you procrastinate, you have passed a point of making a correction for an erroneous decision. Some of your decisions are going to be wrong and you have to either completely change them or adjust them. Every time you procrastinate on making a decision, your people are wasting time. So you need to say, "Yes, let's do this." Then, if they say, "Wait a minute. We better not do it," you can adjust it. You need to make decisions and you cannot get the job done if you don't get to work. It's a team job.