# TEXAS TOWER HELICOPTER OPERATIONS – THE FINAL TWO YEARS { Or How We Introduced the H-3 to the Air Force!}

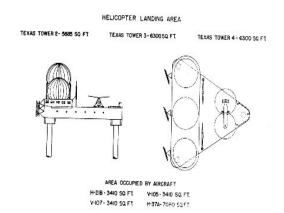
It was August 1961 and five eager young helicopter pilots were assigned to the Helicopter Operation at Otis AFB, Massachusetts, the big base on Cape Cod. They had just graduated from the USAF Helicopter School in Class 61EH the month before and were eager to begin their first operational assignments as pilots. Perhaps we would witness some flying escapades like the stories we heard at Stead from our instructors.

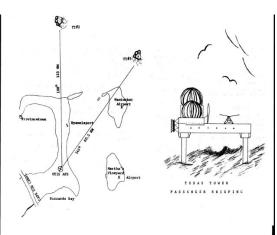
## Little did we realize just how interesting the next two years would be!

We all had heard about, or remembered, the news stories from earlier that year concerning this thing called a "Texas Tower" belonging somehow to the Air Force, that had fallen into the sea near Long Island during a winter storm (Jan 15, 1961). It was a time when most of us were completing Basic Flying Training and getting our wings, so memories were a bit vague. But there were many pilots in the Base Ops Helicopter Section who knew all about

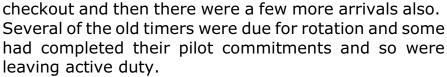
the operation, so we learned perhaps more than we wanted

to know about recent history.





It appeared that we had too many pilots at the time, so it seemed to take a long time to get in the training time for local



There were ten H-21Bs in the fleet at that time, of which nine were considered Tower Ready. One H-21 still had the original wooden blades so it was used only for overland training and passenger trips. The Tower Ready H-21B were equipped with floatation bags in case of ditching over the ocean. We were told of the one

time when engine failure occurred returning from Texas Tower Two: It was nice day, ocean smooth as glass, the bags inflated, the

touchdown was perfect, the helicopter floated long enough for the raft to be launched and everyone except for the copilot stepped in dry. The copilot(F.A. Kelley) had to dog-paddle from his window around to the raft! Successful hoist pickup completed the days work. The craft floated for three days upside down until the Coast Guard sank it! Since winter was approaching, this winter flight to Texas Tower 3. Early 1962



story impressed us to pay attention during survival training and be careful to dress appropriately when going out over the cold Atlantic!

Flying time for training was abundant and lent greatly to acquiring some skill flying the H-21; after all, the actual H-21 School hours were only enough to learn the most basic tasks. The Helicopter Section and the AEW Wing were able to justify as much training time as we had mission time, based on the difficulty of landing on the towers and the skill level required. We new guys thought this was a great idea, indeed!

We soon became aware about the sensitivity of personnel safety for the Texas Tower Crews since the loss of Tower Four. There was a rumor that General LeMay had laid down the law on protection of those occupying the towers and "...heads would roll" up at the Boston Air Defense Center if any more tower personnel were injured. We learned that so far, no one had been injured through helicopter transport although some had been lost during transfer between the support ship and tower deck. Obviously, helicopter transport was desired for all personnel transfers. Approaching the fall hurricane season and high-powered storms, we learned that weathermen kept close eye on lows approaching from the Carolinas - "Cape Hatteras Lows" were considered most dangerous and evacuations would be ordered when such a storm was forecast to move in our direction. We did get a small hurricane that fall; then the strong lows started tracking our way. Thanksgiving Day was supposed to be a holiday, but a Hatteras Low was coming, so maximum effort was initiated. As we left Texas Tower Two, our passengers passed up the news







that we had just left six roasting turkeys in the cafeteria ovens! The rest of the trip to shore was filled with talk "...couldn't we have grabbed a couple to take along!" Those events began a winter season of many evacuations and re-manning; there is some history that a total of ten occurred that winter season, which evidently started some actions at command because some of those evacuations had to be done by

boat, which needed a hazardous transfer.

We weren't really aware of things going on until much later, but in December 1961 we had an interesting visit by Boeing-Vertol that brought a Vertol-107 to Otis AFB for demonstrations. It was a New York Airways configuration, so we had rides, trips to Texas Tower Three, and even some stick time. And, oh yes, we all got a V-107 model in Air Force markings.



I think we also were made aware of a big Air Force procurement project to buy a new long-range support helicopter for Air Force helicopter units and it was some





kind of a competition. Could this all be connected?

In January-February 1962, we started hearing rumors that Sikorsky was promoting a plan

to get us new helicopters for Texas Tower support which would improve our capability to evacuate the tower personnel under poor weather conditions. Apparently, all the right words were said, because suddenly we were to have crews selected and ordered TDY to Sikorsky for factory training on something called HSS-2.

We learned that the Navy had been developing a new helicopter anti-submarine system, based on the new Sikorsky S-61A model. Production of the helicopters was on schedule, however, the new dipping sonar system was way behind schedule. This left Sikorsky with a ramp full of new helicopters which could not be delivered to the Navy.

We surmised that Sikorsky made a proposal to AF and ADC that three aircraft could be bailed to AF, equipped with cargo floor and troop seating for 28. The minimum modifications (closing the sonar hole in hull and sealing the hull for water landings) could be completed in a short time, and new capability for Texas Towers transportation would be available. Logistic support would be available from Navy and both Sikorsky and General Electric tech reps could be made available for maintenance support and training. In the end it all happened, so the Sikorsky proposal turned out to be "an offer that couldn't be refused!" Obviously, Sikorsky was also getting AF familiar with their newest twin-turbine helicopter which would help in the upcoming AF helicopter competition.

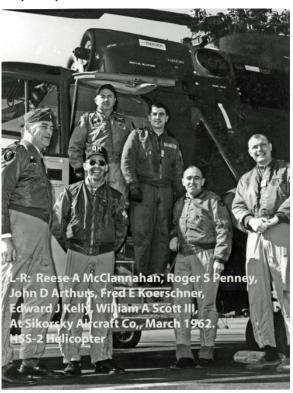
The first group of six pilots were selected; the following class would be ten pilots. The helicopter section was split and sequenced to be sure that the



1 MARCH 1962 - USAF GIVES GO-AHEAD

From Sikorsky's S-61 production line three helicopters were selected to be configured for the Texas Tower utility transport (CH-3B) missions. Troop seats for 28 persons, soundproofing, and a cargo floor were installed.

Sikorsky Status Report July 1963



H-21 operation continued to provide full support. Some pilots due for rotation or separation helped maintain the H-21 operation until they left. Arrangements were made with higher headquarters to allow for controlled dual qualifications to ease the transition; it was intended that both models would continue to be operated to insure adequate support and reserves. Two Sikorsky instructor pilots were also on hand to give on-the-job training after conducting initial checkouts.

Tower flights were accomplished as soon as the HSS-2s arrived at Otis with a Sikorsky instructor and our pilots. Missions were very



First CH-3B flown at Otis AFB 23 March. Upon arrival immediately called into service to transport 22 persons to TT #2. Sikorsky Status Report July 1963

Roger Penney and John Arthurs congratulated by Sikorsky manager.

(We also learned how to "milk the speed selectors" to make aircraft battery starts without "over-temping" the engine!)

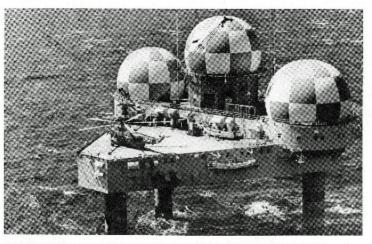
Soon the second group was back at Otis from the Sikorsky factory school, and we set about building the usual training/staneval system and operations instructions for this helicopter operation.

We also found out what higher headquarters(ADC) had in mind for tower emergency evacuations by helicopter! Oh my!

Through a phased plan, we would evacuate all tower personnel except for the minimum caretaker crew of one



efficient, 130-140-knots, cruising at navigating with TACAN, and no problems fitting on deck. No longer did we need to run two aircraft on each mission; no longer multiple refueling stops. One problem was noted early on - we really didn't have a shutdown capability in remote areas. The HSS-2 was built to operate from Aircraft Carriers or shore bases where external power units could be used for engine start. Battery starts of a T-58 jet turbine engine always successful, not determined to keep engines running at the towers initially. Maintenance rigged extra batteries with a cable to plug into external power receptacle to alleviate the problem.



MARCH 1962 TO JULY 1963 – CH-3Bs PROVIDE TEXAS TOWER LIFELINE

In addition to providing routine daily crew transfer and logistics support for the two towers, the CH-3Bs were on stand by for emergency tower evacuation and for long range rescue missions (up to 4½ hours flight endurance).

Sikorsky Status Report July 1963

Converted HSS-2 (S-61A) on deck of Texas Tower 3 SE of Nantucket Island, MA

HSS-2 helicopter load. The helicopter and crew would return to the tower, shutdown, and wait with the remaining tower personnel until an evacuation order was given, or until winds reached 50 knots, or weather got to 200-feet and 1/2-mile visibility( it could have been 100&1/4: fuzzy memory). At that point we were to load everybody on board the helicopter, start up in 50-knot wind or deepening fog, take off and proceed to shore!! Questions abounded, but we were told that was the plan, so get ready to carry it out. It wasn't long until we had our chance.

A strong storm looked to be coming our way, so the evacuation plan was put into operation. Both towers were reduced to minimum number of personnel. TDY orders were cut for two helicopters and crews to go out and spend the night on the towers. It was a good time to keep checking weather and do some flight planning - where could we go? Turned out that the weather moved up the coast and every airport was below IFR minimums! From TT-2 our choice was north to Nova Scotia; from TT-3 maybe Long Island!! Fortunately we didn't have to evacuate that night, so next day we hauled everyone back to their respective towers, and then began some serious discussions with HHQ about HSS-2 weather limitations in the plan.



MARCH 1962 TO JULY 1963 - TWIN-TURBINE POWER-SAFETY AND SPEED
Up to 28 persons were transported to and from the Texas Towers at 140 knots speed,
cutting nine hour boat trip to less than one hour.

Sikorsky Status Report July 1963



MARCH 1962 TO JULY 1963 - EMERGENCY EVACUATION AND RESCUE
In first emergency evacuation of both towers, 170 men were flown to Otis in 7 flights under
IFR conditions — visibility 1/4 mile, 100 ft. ceiting and wind gusty to 50 knots.

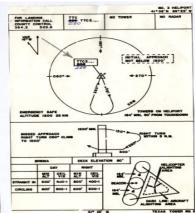
Sikorsky Status Report July 1963

Note the disabled HSS-2 tucked against structure on Texas Tower 2; the automatic Blade fold was handy for these times! Hand-operated tow-bars were kept at towers.

It took a few weeks but we did get some realistic weather conditions written into the plan, including consideration for IFR alternates. In the end, we never had to make one of those emergency takeoffs in the middle of a storm. We would just evacuate the whole crew and return after the storm.

Spring and summer of 1962 were good times – not too many evacuations – so were able to get everyone trained and flight checked, and into a stable operation. We developed procedures for IFR flights to/from the towers, which was difficult at first because of prior restrictions written for ADC helicopter operations, but we overcame or found alternatives for most regulation problems and made IFR operations routine. We also gained some new missions.

June 10, 1962, we had our first rescue mission using the HSS-2/CH-3B. We were tasked out to Georges Banks to pick a seaman off a commercial fishing boat working in that area and return him to shore hospital due to suspected appendicitis. Seemed like an easy mission about 145-miles east of Cape Cod, however, the helicopter only had a UHF radio so we had to relay through the Texas Tower 2 controllers (we



checked 28 fishing boats before finding the right one.) Next problem was the difficulty holding position when the hoist and hoist operator are at the back of the cabin – about twenty feet behind the pilot. A full up HSS-2/SH-3A has a hover coupler, doppler radar and altitude hold for automatic hover with a control stick for the winch operator to actually move the aircraft around in a hover. It had been demonstrated to us, but the equipment wasn't maintained so unusable this day. (This equipment was physically removed later on.) The pilot struggled and the rescue winch operator struggled but eventually he was able to thread the basket down to the deck between the masts, guy-wires and antennas, and we got the guy aboard and back to Otis; 3.5-hours flying time. The crew also got a Winged-S from Sikorsky. Sikorsky representatives said it was the longest over-water rescue mission up to that time. On October 11, 1962, we had another similar rescue mission for a fishing boat seaman which was even farther to





sea and became the new longest over-water rescue. The crew really appreciated the 187-knot ground speed on the return leg to the hospital!

August 9, 1962, we were tasked by AF to support a mission in NYC at the UN. The first cross-Atlantic television broadcasts were to occur using a new satellite called TelStar. So we sent a HSS-2 down to UN building — must have been quite a sight when these pilots were walking all around in the orange flight suits looking for the elusive contact person! That afternoon late there was a view of the UN building, Statue of Liberty, and NY Skyline, from our helicopter being broadcast internationally and on the evening television news.

By fall, HHQ again decided that another adjustment should be made in our fleet to prepare for the winter storm season. Flying rates mixed with the short HSS-2 Phase Maintenance requirements made it difficult to have all three HSS-2s ready all the time to support two tower evacuations and continued use of H-21s was also not considered adequate because of weather and aircrew constraints. In October, 1962, it was announced the AF would buy, not bail, three new Sikorsky S-61A now to be called CH-3B under the new DoD aircraft identification policy. Further, the existing three HSS-2 would also be purchased and converted to AF serial numbers, and standardized with the new three aircraft, and redesignated to CH-3B. The purchase was to be considered an advance purchase under the new Air Force Helicopter Program, where Sikorsky was just named the winner. The

program would supply the new CH-3C configuration helicopters the following year.

So HSS-2 BuWeps Numbers 149009, 11, 12 would become CH-3B serial numbers 62-12571, 572, 573. The new airframes were 62-12574, 575, 576. Sikorsky must have known this order was coming and supplied the three new aircraft within a month! Now H-21s with floatation bags could be released to Tyndall's ADC Drone Recovery mission.

Fall and winter of 1962/63 was another heavy operational period with more evacuations of non-critical personnel from the towers, additional trips for crew changes, and increased use of helicopters for maintenance and supply trips.

BER 1962 - USAF ORDERS 3 ADDITIONAL CH-386

Once more Sikorsky responded to USAF need by supplying 3 additional CH-3Bs in Otis configuration. All three helicopters were delivered ahead of schedule:

PROMISED

19 Days after go-ahead 25 Days after go-ahead

26 Days after go-ahead

READY FOR DELIVERY One day ahead of schedule One day ahead of schedule

Two days ahead of schedule

#### Sikorsky Status Report July 1963

These three airframes were purchased, rather than bailed, under AF Contract and did not have residual SH-3A equipment. Original three were converted to AF serial numbers and configuration resulting in a six CH-3B fleet.

October 1962 we conducted a first night-time trip to Texas Tower 2 with critical radar parts for the south height finder.

The towers had been modified to have an escape capsule at each tower that could hold up to seven people with sustainment for 15 days. This was in part due to Soviet Trawlers nosing around the tower locations and fear that if completely abandoned, the towers could be boarded and claimed by anybody, including the Soviet trawler personnel. Also, the Coast Guard was not happy about being asked to protect the towers from intruders when the towers were unmanned for storms.

Rumors of mission changes and new missions were heard that winter while continuina increased operations with the six CH-





#3of6: Return to TT-2: Underwater Inspection crew going for leg inspection. Dive boat in forground.









3Bs. During 1962-63 winter, re-occupying of the towers following storms required a dive-

team inspection of the underwater condition of tower legs for "scouring and fill" on the ocean bottom. Their reports indicated that after a storm, fill around the legs was washed away, and this became part of the iustification decommissioning towers. It was interesting what the commercial divers would say on a personal level when discussing situation with us as we transported them back and forth many times. It gave us confidence that these towers weren't going to fall in any time soon when we were landing on them.

At this time also, the newer EC-121H were coming to full operations in the 551 AEW Wing at

Early morning takeoff for Texas Tower Remanning and Work crew - March 1963.











Otis. This new system had capability to transmit to shore the radar surveillance data, and when declared operational, really terminated the need for the Texas Tower radars. On January 15, 1963, Texas Tower Two was deactivated, and, on March 15, Texas Tower Three followed. Our flying support for the tower did not abate materially, so it seemed that the mission would continue for considerable time. Maintenance and installation crews required

many daily trips to accomplish the deactivation, dismantling and removal of all high value radar and communications equipment. Equipment was packaged and transported by the support ships.

In January, the rumors of two CH-3B and crews being sent west for missile site support became hard TDY orders for 100 days to Malmstrom AFB, Montana, with possibility of rotating follow-on crews into the future. February saw the two CH-3Bs and crews making their way west through the northern tier of states in mid-winter! Feedback from our Malmstrom crews kept us informed at Otis what the mission actually was doing. The Minuteman missile silo electronic





FEBRUARY 1963 - TWO CH-388 FROM OTIS ASSIGNED TDY TO MALMSTROM AFB

In response to an urgent request from SAC for additional helicopter support for the first operational Minuteman wing, two CII-3Bs from Otis were assigned TDY to Malmstrom AFB. Ferried cross country from Otis to Malmstrom in marginal weather, these aircraft arrived in record time and in commission for operational flights. Sikorsky Status Report July 1963 These two CH-3Bs (572,573) were reassigned permanently to Malmstrom AFB in Fall 1963 and continued to support the Minuteman Wing until May 1964. In June 64 these two CH-3Bs were ferried to Turner AFB, GA, assigned to Mapping & Charting Wing for a time before being reassigned to 2857 Test Sq, Olmsted AFB, PA.

security was not working, so security was being accomplished by Air Police guards being placed on every missile site! These guards were in the open and so needed to be rotated in shifts resulting in millions of miles driven per month with an accident rate the highest in AF. The two CH-3B became airborne buses making these personnel transfers more efficient. Initially there were some growing pains reported – they found themselves working for the Motor Pool with some misunderstandings about operations: why can't we fill all 28 seats like a bus? And what's altitude got to do with it? Fortunately, support from the existing H-19 section smoothed out the operation, and also provided the local area checkout which covered about a fourth of Montana!

Over the first five months more than 7,000 passengers were carried plus cargo.

Meanwhile, back at Otis, rumors turned into talks by Sikorsky about deploying one CH-3B to the upcoming Paris Air Show. The talks revealed another goal on the part of Sikorsky as they lobbied for setting a distance-record during the flight to Paris. The technical plan showed it was possible, but considering a May flight over North Atlantic, little rescue resources



available, a need for some kind of navigation escort, perhaps having Navy carriers along the way, and why doesn't the Navy do it? Well, actually the Navy had tried on a overland route and crashed during the single-engine cruise phase photographer watching.

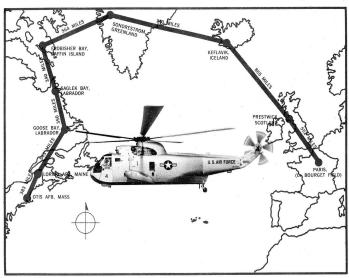


Otis Falcon Crew climbing aboard after commissioning early on 27MAY1963.



needed for the record. Again rumors and talk resulted in actual action. In May 1963, CH-3B 62-12574 was detailed to Sikorsky for modifications and paint job. A large ferry tank was installed in cabin, auxiliary oil facilities was installed in cabin, extra VHF radio installed, an AF silver paint job was given to fuselage along with a map of North Atlantic showing the flight course Newfoundland to Azores for distance record, then to Spain and finally Paris.





USAF CH-3B FLIES FROM OTIS AFB TO PARIS

The "Otis Falcon" flew 4,524 statute miles in 34:40 flight time to participate in the International Air Show at Paris. The Greenland ice cap was crossed at 13,000 ft. altitude. In an official dispatch crew reported — "Only ice accumulation was over London 48,000 ft. for 15 minutes. No Problem. Remainder of flight normal. Entire crew rates aircraft performance and reliability as outstanding. Crew feels aircraft performed better in all cases than flight manual performance charts indications". No spare parts were used on flight.

Sikorsky Status Report July 1963 Departed Otis AFB 27 May 1963 CH-3B 62-12574 was configured by Sikorsky with ferry tank, aux oil, VHF radio, and a new paint job for flight. Map was painted on right side of fuselage.

Although technical approvals were obtained for the over-gross takeoff of 23,000-lbs and the single-engine cruise profile, a General named LeMay stopped the record try when informed of the plan. The original flight course on 574 was erased and the approved route painted showing Canada, Greenland, Iceland, Scotland route to Paris. Sikorsky also checked the mechanical status of complete aircraft.

After filming the fancy departure ceremony, the "Otis Falcon" departed Otis AFB on 27May1963 with three pilots (Capt's John D Arthurs, William B Lehman, William A Scott III) and two flight mechanics. Capt Lehman also held a navigator rating. About 34 flying hours took them to Le Bourget Field, Paris, France. Return was by way of a Navy Carrier.

In late July, another set of pilots and mechanics made the exchange at Malmstrom AFB to continue that TDY mission another 100 days via C-121. The soil of Montana was taking its toll on the rotor blades and engines with all the unprepared landing sites compared to the S-61A over-water/shore-base/carrier design environment. The light weight abrasion strips on main rotor blades were being penetrated and eventually the abrasion strips were pulled off. This left an adhesive which bore the abrasion and peeled back giving a 'musical whistling' to our flights. Heavier abrasion strips were designed into the CH-3C blades as a result.

In August, new orders had to be cut at Malmstrom sending both CH-3Bs and crews to Swift Strike III Exercise in North Carolina to join the remaining four CH-3Bs from Otis AFB. Two Otis CH-3Bs were sent to Sikorsky for modification which included structural changes to support external cargo slings; this was a completely new task for the S-61A model. Supposedly, there was some testing at the plant; results were that Sikorsky pilots cautioned not to use slings for towing. If nose would get too low, recovery would not be assured! Perhaps Sikorsky knew something about the planned exercise missions!

The gathering of helicopters was centered at the recently closed Donaldson AFB, which was reopened as a "bare base" for airlift; helicopters of all models and colors were present. Baylor Haynes from 1001<sup>st</sup> HS was the Ops Boss. This was to be the 'test of the age' to decide which service would handle the "retail logistics airlift" mission. Part of this was a requirement to move a system designed for C-130s to do low-altitude pallet delivery without parachutes. The C-130 would have an extraction hook hanging from its ramp connected to a pallet and would fly very low over a cable stretched across a berm between two energy-absorbing winches called "Twisters". This an adaptation of a Navy short-field landing arresting gear; an idea in advance of the now standard LAPES.





The CH-3Bs were supposed to sling the Twisters, and also a 'small Cat D-4 bulldozer' weighing 4-6,000-lbs! And in the hot August North Carolina weather! Remember that this was before H-47 Chinooks, and H-64 Sky-Cranes, in either service! Early morning, minimum fuel, engine Inlet Guide Vanes (IGVs) tweeked by the GE TechRep to gain as much power as possible from first generation T-58 engines; all became a nice try; close, but no cigar. But there were plenty of other airlift missions; the CH-3Bs were somewhat taken over by the Blue AF commander and the neutral umpires because of their speed and comfortable cabin. In the end, other sling carries were performed well, including Forward Air Control jeeps and even an Army HUEY UH-1 recovery.

At the close of the Swift Strike III operation, CH-3Bs were dispersed to other assignments, effectively bringing the Otis AFB helicopter operation to an end, 16 Aug 1963:

- \* Two CH-3B (572, 573) TDY to Malmstrom returned there 22 Aug 1963 with minimum crew for an interim period until crews could PCS to continue operation until new CH-3Cs were delivered to SAC at Malmstrom AFB for Minuteman Missile Site Support.
- \* One CH-3B (571) was reassigned to 2857<sup>th</sup> Test Sq, Olmsted AFB, PA, with several crews. The two Malmstrom CH-3B were designated for Olmsted AFB when released from Missile Site Support, but it didn't happen as planned.
- \* Three CH-3B (574,575,576) which now had external slings, were reassigned to Tyndall AFB, Florida, for ADC target drone recovery with about half of Otis personnel.

# It had been an interesting two years!

### Epilog:

Eventually, all six CH-3B went to the Satellite Recovery Mission in Hawaii.

Some personnel took assignments to other places; some to become cadre for the soon to be delivered CH-3C. We heard that Texas Tower Two was turned over to a salvage company, stripped, and the legs blown to drop it into the water to be towed to shipyard for scrap. But when dropped into water – it sunk! The salvage company for Texas Tower Three smartly filled it with foam first, successfully towed it to shore and converted it to

scrap. My last CH-3B flight was ferrying 571 from Olmsted AFB to the Sikorsky plant for overhaul and preparation for the Satellite Recovery mission.

My sincere appreciation to William "Bill" A Scott III, Major, USAF Retired, for his critique of this writing and his generous contribution of additional facts and remembrances to the story. He also holds the record for most Texas Tower missions of all the Air Force helicopter pilots that supported this unique mission.



#### Harold A Brattland, LtCol, USAF Retired

PS – If any other member of the Otis Helicopter Operation can add to or correct any of the above remembrances, please do so. The mind becomes fuzzy after forty years, just like my photos.