

Please type or use pen to provide the requested information. This data will be used for the Ranch Hand History Project and then placed in the Archives at Texas A&M. It is your information. If you wish to restrict any part of this material, please indicate so:

I hereby authorize the scholarly use of the following information, except as indicated.

McCONNELL ARTHUR F. JR Arthur F. McConnell Jr 12-25-81  
 Name (last first middle signature date)

### Specific Information

Please answer the following questions in the spaces provided. Be specific.

1. Ranch Hand service: From Jan 68 to Jan 69. Where? Bien Hoa +
2. RH/C-123 training: Where/when? Hurlburt AFB, Oct 67 - Jan 68
3. Rank while in RH? LT Col Present/retired rank? LT Col
4. Duty(s) while in Ranch? Pilot - SQ Commander dates? CDR - May 68 - Jan 69
5. Other Vietnam service? Where/when? None
6. If aircrew member:
  - a. Number of missions: RH 391 Other (specify) \_\_\_\_\_
  - b. Combat flying hours: RH 489 Other (specify) \_\_\_\_\_

### Narrative Information

On a separate sheet(s) of paper, please answer the following questions with as much detail as possible. Write too much, rather than too little. Use names and dates, if possible. If you want a name "blacked out" before this goes in the archives, just circle the name. On the sheets, indicate the number of the question you are answering, and put your last name and the form number in the upper right-hand corner of each sheet.

7. Special missions/operations participated in? (name, when, where, what, who else)
8. Decorations? (If Purple Heart, DFC, or above, give date and details of the act. If you have a copy of the narrative justifying the medal, please attach a copy.)
9. Were you present during an attack against the base, Ranch site, or quarters? Explain.
10. Were you present when a Ranch aircraft was shot down or crashed? Give all details.
11. Were you present when a Ranch crew member was killed or wounded? Give as much data as possible, even if you didn't directly observe it or are not sure of date or names.
12. Did you ever see or repair unusual battle damage (more than routine skin holes)?
13. Did you ever help plan RH missions? If so, what was the procedure?
14. How did you get into the Ranch? What did you know about the mission beforehand?
15. What were you told about the chemicals used? In Vietnam? Before Vietnam?
16. Other than something already discussed (or going home), what is your happiest memory of the Ranch (or Vietnam)? What is your unhappiest (saddest)?
17. What unusual, odd-ball, weird, funny, etc., thing happened to you in VN or training?
18. Same as question 17, but you saw it happen to another person(s).
19. What were your quarters like? Your routine day? Your parties? Anything else?
20. We know that the Ranch was unique. What should I tell the reader that will help him understand why this was a special outfit of special people? What or who should I not talk about?

Other data: Do you have any good pictures (especially of RH members), any journals, notes, diaries, letters, briefing notes, maps, etc., that I could copy? If so, DO NOT SEND THEM with this form. Repeat...DO NOT SEND THEM!!!! Describe the items on a separate piece of paper, with your name and form number on it. I will write and give you instructions on when to send them, or how to get them copied, at a later date. All materials will be protected and returned to you!!! Thank you for your help and time.

Please return this form and the narrative sheets in the enclosed envelope to Texas A&M.

Dec 25, 1981

Dear Paul,

It's Christmas and I'm feeling magnanimous  
so I'll apologize for not filling out your enclosed  
form and answering your appeal sooner but I'll  
try to make amends.

Instead of replying directly to the letter  
questions on your questionnaire I think I can help  
you better - and the Ranch Hand historical  
record - by providing you with a narrative  
summary of my experiences as a Ranch Hand.  
Since my experience covers time as a "new"  
pilot, the Tet offensive and the Ranch conversion  
to airlift missions plus the opportunity to command  
through several highlights during 1968 -

most aircraft assigned, most people assigned, most diversionary problems - at the peak of activities, the information in chronological order might be of some value in preparing a "history" of the Ranch.

As I've mentioned to you before, I also have some documents you haven't seen such as "Report on the Herbicide Policy Review", 28 Aug 68, prepared for the American Embassy in Vietnam by a committee representing the Embassy, MACV, USAID and SUSPARO and an "Evaluation of the Defoliation Program", 18 Oct 68, prepared for the MACV commander by the MACV staff.

Additionally, I have many, many slides which were used for briefings for command pres-

entations, VIP visits, and incoming personnel to the Ranch. The slides, many of them, are actually better than the ones you showed at the reunion.

I'll try to put that narrative together as soon as I can. In the meantime, let me know if you want to see the slides or written material.

TO THE POINT!

Art McConnell

• 110

# TEXAS A&M UNIVERSITY

DEPARTMENT OF HISTORY

COLLEGE STATION, TEXAS 77843

Telephone (713) 845-7151

## RELEASE FORM

I hereby authorize Paul F. Cecil to use the material contained in my "Ranch Hand" Oral History interview tape(s) for scholarly research and publication.

I agree that, at Paul Cecil's discretion, these tapes may be kept in the Archives of Texas A&M University and will be made available for historical research and study after a period of 0 year(s).

1, 2, 5, or 10

Other Restrictions:

*None*

*Paul F. Cecil*

Signature

Date

Tarpon Springs, FL

ADCIO

**Project CORONA HARVEST End-of-Tour Report**

ASI (ASD-1R)

Maxwell AFB, Ala 36112

**PART A. BIOGRAPHICAL INFORMATION**


Name Arthur F. McConnell, Jr. Rank Lt Colonel

Duty station in SEA Bien Hoa Air Base

Job Title Commander Duty AFSC 1055C

Inclusive tour dates in SEA Jan 24 '68 - Jan 3 '69

**PART B. Attached is a comprehensive summary of operations involving Ranch Hand mission in Vietnam. If this summary does not meet the objectives desired for your project, please advise and additional information or a change in format will be provided.**

  
ARTHUR F. McCONNELL, Lt Col, USAF 1 Atch  
Deputy Director Summary  
Command Directorate of Information  
Hq ADC

Copy 3 of 3

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## FOREWORD

The nature of the conflict in South Vietnam, and the environment within which it must be waged, have required Allied military forces to revise many traditional strategic and tactical concepts of operations. Perhaps the most difficult and frustrating problem facing these forces is that of actually locating the enemy. The many densely forested areas located throughout the country afford the enemy excellent concealment and permit him to rapidly move personnel and supplies with impunity, to within striking distance of key Government centers, lines of communication, and Special Forces camps. To deny this advantage to the enemy, the United States Air Force organized the 12th Special Operations Squadron (RANCH HAND), the world's first military aerial defoliation unit.

In 1961, in an effort to solve the perplexing problem of locating the enemy, the Governments of Vietnam and the United States initiated a test defoliation project utilizing an aerial spray delivery system. While aerial spraying had been used commercially for many years, the military application of defoliants had been little studied, and their tactical value remained to be proven. The results of these test demonstrated that, given the proper conditions, this weapon system was extremely effective against the enemy's base camps and lines of communication, and could be used to enhance Allied military ground operations.

The political implications associated with chemical warfare are well known, and the RANCH HAND Project, as it came to be called, was carefully studied by the Governments involved. Missions were carefully selected and authority for their execution tightly controlled, until the results and the political impact could be evaluated. The results proved to be outstanding, and the decision was reached to make the program operational. Aerial defoliation then became another key part of the aerial support being provided Allied ground forces fighting for the freedom and liberty of South Vietnam.

The report which follows briefly recounts the exploits of the men and aircraft who have made the defoliation mission such an outstanding success.

ARTHUR F. McCONNELL, JR., Lt Colonel, USAF  
Commander  
12th Special Operations Squadron (RANCH HAND)

## THE RANCH HAND MISSION

THE PRIMARY MISSION OF THE 12TH SPECIAL OPERATIONS SQUADRON IS TO DEFOLIATE ENEMY SAFE HAVENS, STORAGE AND SUPPLY AREAS, LINES OF COMMUNICATION, AND SELECTED FRIENDLY AREAS, THUS DENYING AMBUSH POTENTIAL AND IMPROVING VISIBILITY FOR AERIAL AND GROUND OBSERVATION. A SECOND MISSION IS THAT OF RESOURCE CONTROL WHICH IS ACHIEVED THROUGH SELECTIVE CROP DESTRUCTION. ALL TARGETS ARE CHOSEN ONLY AFTER THE MOST DETAILED COORDINATION WITH APPROPRIATE SOUTH VIETNAMESE GOVERNMENT AND MILITARY AUTHORITIES.



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## INTRODUCTION

Since the inception of defoliation spray operations in South Vietnam, crewmembers dedicated to the RANCH HAND mission and to assisting the South Vietnamese Government to achieve peace and freedom for their Nation, have flown their unarmed UC-123 defoliation aircraft throughout the country - from the Delta to the Demilitarized Zone, from the Laotian and Cambodian borders to the South China Sea.

Between the date of the first RANCH HAND flight, in January, 1962, and October 1st, 1968, defoliation crews compiled a total of over 18,000 combat sorties, all of which were flown under the extremely difficult and hazardous circumstances associated with defoliation work. With rare exception, target areas were occupied and/or utilized by unfriendly forces and consisted primarily of hostile base camps and lines of communication, as well as selected crop targets. Because of the sensitivity of the defoliants being applied, and to insure maximum effectiveness, aircrews were required to fly their aircraft in close formation at an altitude only 100 feet above the terrain and at a constant 130 knots indicated airspeed. This low altitude and airspeed greatly restricted aircraft maneuverability and placed the aircrews in an extremely hazardous and vulnerable position. This is underscored by the fact that this one Unit received a total of well over 3,000 hits from hostile weapons fire during the period cited above. Yet without hesitation, and with complete disregard for their personal safety, in an outstanding display of courage and determination, these combat crews daily flew into one hostile environment after another, and laid their defoliant with outstanding precision.

The unique role played by the Unit in Southeast Asia has bred an esprit de corps among its members that is known and respected throughout their area of operations. Taking immense pride in their mission, their aircraft, and their uniform, the RANCH HAND crews have displayed gallantry and courage of a nature which far exceeds the meaning of these words. With full knowledge of the importance of their work, as well as its hazardous nature, they have continued on countless target runs while receiving intense and accurate hostile ground fire, in order to complete their assigned mission. Under circumstances far beyond those which challenge most combat crewmembers, in situations wherein their aircraft have been badly damaged and crewmembers wounded, in situations where the target runs could have been abandoned without fear of any criticism, the spray crews have continued their work, and remained "on target". By so doing, they have significantly increased the capability of aerial observers to monitor hostile force movements and direct fighter-bomber strikes

against them, and more importantly, they have provided Allied ground forces with protection against sneak attack, by depriving enemy troops of valuable ambush positions. In essence, they have enhanced the combat effectiveness of Allied air and ground forces fighting in Vietnam.

The obvious corollary to a successful air mission is a successful ground operation, and the dedication of Unit maintenance crews in preparing the aircraft for flight, in continually repairing battle damaged aircraft and returning them to operational status in minimum time, is equally responsible for the success enjoyed by the RANCH HAND mission.

With admirable zeal and determination, every member of this Unit has performed his duties far and beyond that which was expected of him, and their spirit and devotion to the mission have become a legend in Southeast Asia.

The tenacity and courage displayed by this Unit, coupled with an intense pride in their accomplishments, reflect the greatest credit upon its members and the United States Air Force. Their efforts have perhaps best been summed up in a recent issue of the Ordnance Association Magazine: "... (they) have written a new annal in the history of aerial flight."

The information which follows is designed to amplify the history, operations and achievements of the 12th Special Operations Squadron.

## OPERATIONAL HISTORY

The use of air-delivered chemical defoliants as a tactical weapon evoked considerable interest as early as 1945, and was employed with a fair degree of effectiveness by British forces operating in Malaya during the late 1940's. In this instance they used helicopters to apply the defoliant along lines of communication. It was not until 1958-9, however, that the United States undertook any large scale testing in this area. In that year, an extensive evaluation program was initiated by the United States, in conjunction with the Government of Thailand. As a result of this test series, several acceptable defoliants and delivery techniques were selected for further consideration.

### Special Aerial Spray Flight

By late 1961, an operational test program (initially called Project FARM GATE) was approved for the United States Air Force. With the full concurrence and support of the Government of the Republic of Vietnam, and the Vietnamese Air Force, this project, under the new code name RANCH HAND, began trial operations in January, 1962, with three especially equipped C-123 aircraft based at Tan Son Nhut Airport, Saigon, RVN. The initial unit designation was the Special Aerial Spray Flight. Because of the newness and uniqueness of this weapons system, the volunteer crews assigned to the RANCH HAND project were forced to design their own concept of operations and an entire range of tactics and delivery techniques. Learning by trial and error, constantly innovating and modifying, the crews slowly developed a highly effective defoliant delivery operation which was geared to the varied tropical vegetation, foliage and terrain of Southeast Asia.

By June, 1962, the crews of the Special Aerial Spray Flight were ready to fly tactical missions, and it was not long before the merits of this delivery system were proven. A notable effort occurred a few months later, when, in October, 1962, the crews successfully completed their first large-scale defoliation mission, on the Cau Mau Peninsula in the Mekong River delta. This project was personally observed and evaluated by the Chief of the U. S. Army Chemical Corps, and the results were reported to be "outstanding".

Throughout the next few years, however, defoliation operations were mostly conducted on a moderate scale, although by mid-1964, authority had been received to expand project coverage and to establish limited operations from Da Nang Air Base, RVN. The program was proving its worth wherever aerial defoliation methods were employed, and new target requests were constantly being received. After studying the results of

actual missions, it was determined that an altitude of 100 feet above the terrain, at a speed of approximately 130 knots indicated, provided the most effective and efficient delivery of the defoliant, in spite of the fact that to maneuver an unarmed cargo aircraft at such a low altitude and low airspeed was, at best, difficult. As hostile ground fire became an ever-present reality, the mission became extremely hazardous. Because of these factors, the heroic efforts of the early spray crews were not without cost. In February 1962, the defoliation unit suffered its first combat loss when a C-123 aircraft and its crew of five were felled by enemy ground fire. Since the concept of assigning fighter aircraft to escort and support the defoliation project had not yet been developed, the spray aircraft were entirely defenseless. However, despite the considerable number of problems inherent in their mission, the valiant RANCH HAND crews delivered increasing amounts of defoliant on targets located throughout the country.

In July, 1964, a new challenge was delivered to the RANCH HAND crews, when the Governments of the Republic of Vietnam and the United States mutually agreed to initiate crop destruction missions against targets specifically selected by the Vietnamese Government. This program was continued through the years that followed, and has proven a vital adjunct to ground force operations, by both denying food sources to the enemy and their sympathizers, and by requiring the enemy to divert military personnel from the battlefield into the food production area.

Despite the fact that RANCH HAND aircraft were continuing to receive heavy automatic weapons fire from hostile ground locations with increasing regularity, it was not until January 1965, that approval was granted to prestrike targets with fighter aircraft, and to provide a fighter escort for the spray aircraft. This occurred during Operation "Sherwood Forest", a massive attempt to burn out a defoliated section of the Boi Loi Woods, in the hopes of denying the enemy an extremely vital base camp area. From this point forward, close-in fighter support has been a vital part of the defoliation program and has made a significant contribution towards minimising the effect of unfriendly ground fire against the defoliation aircraft, although it could not entirely eliminate the subsequent losses of additional aircraft and crews.

It is interesting to note that, during this period and for the next year, several "fire storm" projects, similar to the Boi Loi Woods effort, were made in conjunction with the Vietnamese Air Force. While the attempts to ignite the defoliated areas met with limited success, the effect of the defoliant itself significantly improved visibility for observation in each of the project areas.

Operations continued to increase during 1965, with the Special Aerial Spray Flight successfully completing defoliation of a number of critical target areas. Particularly noteworthy was the unit's work in the Rung Sat Special Zone, a dense mangrove-covered swamp located along the main shipping channels into Saigon. Because of the excellent cover afforded by the mangrove swamp, hostile forces operated with near-impunity throughout the area, and constantly harassed allied shipping into and out of the Capital City. Therefore, in March, 1965, Rung Sat was placed on the list of critical targets, and in the weeks that followed, spray crews delivered over 77,000 gallons of defoliant on the target while flying some 42 missions into the area. The results must rank as one of the most successful projects carried out by RANCH HAND crews, as they laid the land completely barren, thereby permitting friendly forces to sweep the area and secure the shipping channels against further enemy encroachment.

Another vital target received during this period was War Zone "D". In spite of heavy hostile troop concentration within the target area, and almost continuous ground fire, the spray crews returned again and again, until the project was successfully completed. Still another accomplishment worthy of note was the defoliation of the Ho Chi Minh Trail utilizing aircraft staged out of Da Nang Air Base. One intelligence source credits the destruction of approximately 1,000 enemy trucks to the successful defoliation effort which opened up roads and trails in the area, thereby permitting fighter aircraft to accurately deliver their munitions.

### 12th Air Commando Squadron

Because of a greatly increased demand for defoliation throughout South Vietnam, the United States Government directed that the RANCH HAND program was to be expanded, and on 15 October 1966, the 12th Air Commando Squadron (RANCH HAND - VIETNAM) became an administrative and operational reality. Initially equipped with 18 UC-123 spray aircraft, the crews (all hand-picked volunteers) quickly established an outstanding reputation throughout South Vietnam.

Several important events occurred in the months which followed the establishment of the 12th ACS, including approval to assign one aircraft into Operation "Flyswatter", a program designed to deliver insecticides over various populated areas located throughout the country, in order to control the malaria-carrying mosquito, as well as other disease-bearing insects. Using techniques similar to those employed in defoliation, the insecticide aircraft and its crews have made an outstanding contribution to the health and welfare of the people of Vietnam, by controlling and preventing many diseases through their spray efforts.

By late 1966, the 12th Air Commando Squadron had significantly increased its defoliation operations, and received another key project when the southern half of the Demilitarized Zone (DMZ) was approved for targeting. The outstanding results achieved in this project (and six months later, when the northern half of the DMZ was also approved) are still much in evidence today. Flying over extremely flat terrain, and visible for many miles throughout the target run, the RANCH HAND crews courageously defied great odds to place their defoliant precisely on the briefed targets. As a result of these operations, much of the DMZ was laid bare, and the enemy was denied ready access to his hitherto secure infiltration and supply routes into South Vietnam.

In December, 1966, as RANCH HAND crews continued on their country-wide defoliation schedule, the 12th Air Commando Squadron moved to Bien Hoa Air Base, RVN, which remains today its operational headquarters.

During early 1967, the main areas of activity were taking place in War Zones C and D, while Da Nang based aircraft concentrated on targets near the Laotian border and in the southern portion of the DMZ. One of the highlights of this period was Operation "Pink Rose", the third jungle-burning project carried out by RANCH HAND crews. In support of this project, the Unit flew approximately 225 sorties and delivered over a quarter million gallons of herbicide on selected target areas in War Zones C and D, successfully completing their part in the project in April, 1967.

Target areas throughout the country were sprayed during the remainder of this period, with particular emphasis being placed on vital targets in the Corps area. This accounted for the significant increase in hits received during 1967.

The flexibility of the 12th Air Commando Squadron was severely tested in February, 1968, when, in the throes of the communist Tet offensive, the unit was directed to assume an airlift role under the direction of its parent wing, the 315th Air Commando Wing. Accepting the challenge, the RANCH HAND team stripped the aircraft of all defoliation equipment, including tanks, spray booms and plumbing, and reported in, "ready to go", in the amazing time of only 24 hours. During the weeks which followed, crews of the 12th flew a total of 2866 productive sorties as they performed their airlift role with the same professionalism and seal which have become the RANCH HAND trademark.

With the Tet offensive successfully blunted, the UC-123 aircraft were restored to their defoliation mission, and again, in minimum time, maintenance teams reconfigured the aircraft and spray operations resumed shortly thereafter.

The remainder of 1968 reflected a continuing increase in the amounts of herbicides dispensed and experimental testing of new formations and tactics. Also, in order to take advantage of seasonal weather in spraying priority targets in I Corps, a significant increase was made in the size of the detachment operating from Da Nang Air Base, and the sortie rate doubled. RANCH HAND crews operating from this forward base flew highly successful defoliation missions against some of the most heavily defended areas in South Vietnam, including the A Shau Valley, Khe Sanh and Route 9, and along the Laotian and Cambodian borders as far south as Pleiku. In defiance of the rugged mountain terrain and accurate enemy anti-aircraft fire which faced them, the defoliation crews went in again and again, against these vital targets in order to open them up for aerial observation; in all cases, the results were outstanding.

As the number of missions increased, so did the exposure to enemy ground fire. In May, 1968, while making a defoliation run on a heavily defended enemy base camp area in the Mekong Delta, a RANCH HAND formation came under severe and accurate automatic weapons fire. The number two aircraft in the formation received a number of direct hits which caused one engine to explode, and the aircraft and its gallant crew were lost as they made a vain attempt to save their aircraft.

Briefly then, this is the history of the RANCH HAND operation. Redesignated the 12th Special Operations Squadron in August, 1968, this unit has established an enviable and proud history, written with the toil and sweat, and blood, of the officers and airmen assigned to the defoliation mission. Although the personnel change, each man in turn has become imbued with the desire, spirit and courage of his predecessors, and this dedication and devotion to duty, and to the spray mission in Vietnam, has proved inviolable.



## RANCH HAND MISSION STATISTICS

### DEFOLIATION

During the period being cited, crews of the 12th Special Operations Squadron amassed the following mission achievements:

<u>YEAR</u>	<u>COMBAT SORTIES</u>	<u>HERBICIDE DELIVERED (Gallons)</u>
1962	60	49,240
1963	107	89,282
1964	273	218,510
1965	468	262,700
1966	< 2439	4,288,320
1967	7096	5,045,545
1968	7911*	3,520,705*

(\* The 1968 figures include a total of 2866 combat airlift sorties flown in support of Allied forces during the Tet offensive. The diversion of aircraft into the airlift role significantly reduced the herbicide sprayed during the months of February and March.)

### INSECTICIDE

Crewmembers assigned to Operation "Fly Swatter", the special insecticide delivery operation conducted by the 12th Special Operations Squadron, have sprayed the following quantities of insecticide in the support of continuing effort to eliminate and control disease-bearing insects in South Vietnam:

<u>YEAR</u>	<u>INSECTICIDE DELIVERED</u>
1966	(Figures not available)
1967	118,985
1968	111,998

BATTLE DAMAGE

During the period cited in this document, the crews and aircraft of the 12th Special Operations Squadron (RANCH HAND) have achieved the distinction of being the unit most heavily hit by hostile fire during the Vietnam conflict. In July, 1968, the RANCH HAND crews passed the 3,000th hit mark, with no let-up in sight. Following is a compilation of hits received from enemy ground fire:

<u>YEAR</u>	<u>NUMBER OF CONFIRMED HITS</u>
1962 - 63	465
1964	194
1965	156
1966	885
1967	1017 27 17
1968*	426

\* (Figures for 1968 reflect the period from 1 January through 1 October)

## COMBAT LOSSES

The very nature of the RANCH HAND mission, and the environment within which it is flown, requires the highest degree of professionalism and aerial skill. But most of all, it requires a rare standard of bravery and courage, and when necessary, the supreme sacrifice. The men of the 12th Special Operations Squadron have willingly accepted their mission, knowing full well its hazards, because of their sincere belief in the cause to which the Government of the United States is so deeply committed - freedom for the people of the Republic of Vietnam. In support of this great cause, the following combat losses have been sustained by this Unit:

February, 1962	Aircraft lost with three crewmembers
May, 1962	Aircraft lost; crewmembers rescued
June, 1966	Aircraft lost; crewmembers rescued
October, 1966	Aircraft lost; crewmembers rescued
January, 1967	Aircraft lost with five crewmembers
May, 1967	One crewmember lost; aircraft recovered
July, 1967	Aircraft lost with four crewmembers
September, 1967	Aircraft lost with four crewmembers
May, 1968	Aircraft lost with three crewmembers

*9 a/c = 24 crew*

The sacrifice of the 18 RANCH HAND crewmembers killed in action in South Vietnam during this period, has served to inspire those who served with them, to pursue with increased vigor the mission given them, and to insure that these losses were not made in vain.

## MAJOR PROBLEM

The 12th SOS was originally assigned a primary mission, that of defoliation, which in itself is composed of three type missions - defoliation, crop destruction (resource control) and malaria control. The 315th Special Operation Wing arbitrarily imposed a second mission, that of airlift capability, since the 12th was one of the five tactical squadrons of the wing. The original assignment of the 12th to the 315th had its primary basis in the utilization of the same type of aircraft, the C-123, and the early attachment of the spray flight to the 309th Squadron.

The 7AF Operations Order assigning the primary mission to the 12th makes no mention of a secondary mission for the 12th SOS.

The defoliation mission and the airlift mission are incompatible. Altho the defoliation aircraft can be reconfigured for airlift missions, the resultant loss in primary mission effectiveness, plus the cost in training, maintenance man-hours used in conversion, and wear-and-tear on the aircraft, mitigate against assignment of a secondary mission.

Twice during 1968 the 12th was called upon to assist in tactical airlift. The first occasion, immediately following the TET offensive of February, was a time of actual emergency and the action was called for. The second time, in October, was not necessary and subjected the 12th to an unnecessary costly exercise.

The primary Ranch Hand mission is unique, highly discriminatory, specialized and deserving of 100% attention on the part of those assigned to it.

By virtue of assignment to the 315th SOW, the 12th SOS has been placed in an untenable position of split responsiveness. Operational control for target acquisition, coordination and primary mission accomplishment is exercised by MACV headquarters (Chemical Operations Division, COC). Operational requirements such as fighter escort and FAC support are directed by 7th AF Tactical Air Control Center. Thus operational control is direct and effective.

The Ranch Hands are located on Bien Hoa Air Base as a tenant unit. Maintenance and supply support are the responsibility of the 3rd Tactical Fighter Wing. The base CBPO is the servicing agency for personnel matters.

The 315th SOW is located at Phan Rang Air Base, approximately 150 air miles from Bien Hoa. Ground communications and mail service are

limited, sporadic and relatively inefficient for proper administration of the 12th SOS. The 315th SOW continually interposes personnel, logistic, maintenance and operational problems which many times have no bearing on the mission of the 12th SOS since they are predominately airlift oriented.

For example, the 12th SOS as a 25 UE unit is authorized 75 pilots. Each of the airlift squadrons are 16 UE units with a 40 pilot authorization. Ranch Hand assigned pilots undergo additional specialized training at Hurlburt AFB to prepare for the unique exacting mission. Yet the 315th SOW continually drafts pilots from the 12th when their pilot resources fall below minimums.

The solution to the problem of more efficient and effective handling of the Ranch Hand mission is to assign the squadron directly to 7AF and consolidate all reporting and administrative aspects in the 7AF TACC. There already exists a special office manned by three officers - two of whom are supplied from Ranch Hand after five months experience in the squadron - who could provide all the necessary policy guidance and staff assistance required. Maintenance, supply, logistical and personnel support would be unaffected. Administrative and operational effectiveness would be greatly improved as well as morale.

## U. S. COMMANDERS EVALUATION SOLICITED IN 1968

### I CORPS

Defoliation has provided for increased surveillance and the interdiction by fire of areas which previously offered concealment to enemy use. Ground troops have been assisted by increased observation permitting sweeps of larger areas and reduction of enemy ambush sites. Along LOC's operations have been facilitated by defoliation. Ambush sites have been exposed thereby considerably reducing enemy attacks on convoys. Defoliation along streams has assisted in the reduction of enemy use of these terrain features as LOC's and routes of infiltration by exposing them to aerial observation.

### II CORPS

Defoliation and crop destruction operations have been effective in enhancing the success of allied combat operations. The operations are normally limited to areas under VC/NVA control remote from population centers. The defoliation program has resulted in reduction of enemy concealment and permitted increased use of LOC's by friendly units. Aerial surveillance of enemy areas has improved and less security forces are required to control areas of responsibility. The destruction of enemy food supplies has resulted in some instances in the diversion of enemy troops to agricultural rather than combat duties. The VC/NVA collection of taxes and food from civilians, impressment of laborers and VC/NVA food shortage resulting from crop destruction caused several personnel to rally under the Chieu Hoi program. An overall result of the herbicide program has been to increase friendly security and to assist in returning civilians to CVN control.

### III CORPS

Herbicide operations have contributed significantly to allied combat operations. Increased visibility afforded friendly forces and the concurrent denial of concealment to the enemy have been especially important. Large area defoliation has increased vertical visibility in hardwood forests from 75-80%. Similar improvements in visibility have been attained in double canopy jungle where successive missions have been flown. Aerial photos can be taken which "see to the ground" in areas previously obscured thus aiding visual reconnaissance. FAC's have discovered enemy bases in defoliated areas which had been previously unknown or overlooked. Defoliation has increased the security of friendly installations

and decreased the number of potential ambush sites available to the enemy. Defoliation of areas from which the enemy can establish mortar positions and rocket launch sites is particularly important. Defoliation also complements the land clearing program being carried out in this zone. Areas too wet or steep to cut are defoliated. Crop destruction denies local supplies of food to the enemy. The effort expended to destroy crops is negligible compared to the effort required to secure the same crops from enemy use or to destroy them by some other means.

#### **IV CORPS**

Without exception one successful defoliation mission has led to a deluge of requests for other areas in a given province. Each successful mission has caused the submission of 4-5 other targets for C-123 defoliation.

Defoliation operations have proved to be a useful tool. Herbicides have deprived the VC of cover and concealment, safeguarded waterways and highways, improved outpost security, and cleared fields of fire around fixed installations. It has also significantly reduced the need for large numbers of troops in areas adjacent to sprayed targets. In some areas defoliation operations provide virtually the only CVN pressure on the VC because of lack of mobility, high water and density of vegetation which makes ground military operations prohibitive in terms of manpower losses and assets required to sustain an operation. Defoliation operations concentrate the VC and restrict him to more accessible areas where the ARVN can find, fix and destroy the guerilla.

#### **COMNAV**

The Commander of Naval Forces, Vietnam, views the defoliation program as contributing directly to successful operations in the RSSZ. Prior to the defoliation program, air targets were completely camouflaged and detection practically impossible. The overhanging cover over many of the small streams allowed the VC virtually complete freedom of movement. Since the beginning of defoliation, the VC have had to actively camouflage their facilities. The increase in tactical air operations is illustrated by the change in bomb damage assessment which went from no evaluation to the following, for a six month period:

Enemy killed in action	12
Military structures destroyed	378
Bunkers destroyed	410
Manned auto-weapons silenced	19
Sampanes destroyed	21
Fighting foxholes destroyed	2
Rice supply destroyed	11,000 tons
Fighting trench line destroyed	1170 feet

**The net results of comments from U.S. and CVN commanders are all favorable, and they, without exception, ask for more herbicide sorties than the program can deliver at the moment or in the near future.**



## ENEMY STATEMENTS

The data presented here comes mainly from the statements made by the VC or their sympathizers during interviews or interrogations conducted after capture.

A VC POW observed that after a base area, located in sparsely vegetated areas, had been sprayed, the camp would be moved. The move was not very difficult. Each man would pick up his hammock and backpack and walk about 3 hours to the new camp location. If the base camp was located in heavy canopy, the branches of the trees, even though devoid of leaves, would protect them from observation from the air. This last indicating that observation from the air is to be avoided by the VC. Another POW stated that defoliated areas presented obstacles to the VC in movements and stationing of troops. These areas had to be avoided for nearly a year before they could be reused. The defoliation has seriously hampered or made more difficult the movement of the VC due to their dislike for favorable air observation. When it is necessary to cross a defoliated area, enroute to an objective, the VC wait for night-fall or cross singly -- either course of action delaying the movement. When it is necessary to cross small defoliated areas, they may well cross in the daylight provided the unit can assure itself that no aircraft are in the vicinity. With regard to the defoliation along GVN LOC'S, the VC have published orders making the removal of brush and trees along roads and waterways a punishable offense. The defoliation and subsequent removal of vegetation along such lines of communication would therefore be a prudent exercise. The VC do make use of the cover along roads and waterways for hiding places from which to initiate ambushes. If this part of the program has any merit or profit to US/GVN efforts, there should be a decrease in the number of incidents along defoliated portions of the LOC and that decrease should become apparent immediately after defoliation has taken effect -- I. E. , the leaves have fallen.

What then is the record for incidents along defoliated LOC'S as compared to undefoliated LOC'S? There are definite advantages to be accrued from the defoliation program, particularly along the LOC'S of South Vietnam. In one instance, no ambushes or incidents occurred after the defoliation. In another, there were only 11 in a 4 month period. And in a third, the number of incidents decreased from 6 in 4 months to 4 in 6 months. During this same time period, the amount of traffic along these roads remained constant or increased. Thus the defoliation served to provide for a dramatic decrease in the incident rate while at the same time the potential for ambush (traffic) increased. The defoliation along <sup>one</sup> river caused the VC to evacuate their sheltered positions along the bank. The defoliation along another river caused at least 3 ambush attempts to be unsuccessful in a region where ambushes were regular before the defoliation.

## OTHER INDICATORS OF EFFECTIVENESS

There is a vivid improvement in ability to find routes of travel, bunkers, structures and defenses after the foliage cover has been removed.

War Zones C and D have been heavily defoliated. Prior to defoliation, 7 brigades were necessary to maintain US/GVN presence in War Zone C. After defoliation, only 3 were required. In War Zone D, only one brigade has been necessary (after defoliation). Plans called for a 2 1/2 division size effort to be conducted. The defoliation negated the need for the operation. These two examples point up the value of the operations to date and give credence for the continuation of the defoliation program.

In summary, the program does what it is intended to do. The routes of movement are being revealed, the hiding places for the VC are being eliminated. The VC are thus forced to divert resources to non-combatant tasks (moving base camps, waiting for hours of darkness, etc.) because of the defoliation program. And finally, the number of trucks and troops lost in ambushes is decreasing because of the defoliation operations.

ADCIO

**Project CORONA HARVEST End-of-Tour Report**

ASI (ASD-IR)

Maxwell AFB, Ala 36112

**PART A. BIOGRAPHICAL INFORMATION**

Name Arthur F. McConnell, Jr. Rank Lt Colonel

Duty station in SEA Bien Hoa Air Base

Job Title Commander Duty AFSC 1055C

Inclusive tour dates in SEA Jan 24 '68 - Jan 1 '69

**PART B. Attached is a comprehensive summary of operations involving Ranch Hand mission in Vietnam. If this summary does not meet the objectives desired for your project, please advise and additional information or a change in format will be provided.**



ARTHUR F. McCONNELL, Lt Col, USAF  
Deputy Director  
Command Directorate of Information  
Hq ADC

1 Atch  
Summary

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ONLY

Copy 2 of 3

## THE RANCH HAND MISSION

THE PRIMARY MISSION OF THE 12TH SPECIAL OPERATIONS SQUADRON IS TO DEFOLIATE ENEMY SAFE HAVENS, STORAGE AND SUPPLY AREAS, LINES OF COMMUNICATION, AND SELECTED FRIENDLY AREAS, THUS DENYING AMBUSH POTENTIAL AND IMPROVING VISIBILITY FOR AERIAL AND GROUND OBSERVATION. A SECOND MISSION IS THAT OF RESOURCE CONTROL WHICH IS ACHIEVED THROUGH SELECTIVE CROP DESTRUCTION. ALL TARGETS ARE CHOSEN ONLY AFTER THE MOST DETAILED COORDINATION WITH APPROPRIATE SOUTH VIETNAMESE GOVERNMENT AND MILITARY AUTHORITIES.

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## FOREWORD

The nature of the conflict in South Vietnam, and the environment within which it must be waged, have required Allied military forces to revise many traditional strategic and tactical concepts of operations. Perhaps the most difficult and frustrating problem facing these forces is that of actually locating the enemy. The many densely forested areas located throughout the country afford the enemy excellent concealment and permit him to rapidly move personnel and supplies with impunity, to within striking distance of key Government centers, lines of communication, and Special Forces camps. To deny this advantage to the enemy, the United States Air Force organized the 12th Special Operations Squadron (RANCH HAND), the world's first military aerial defoliation unit.

In 1961, in an effort to solve the perplexing problem of locating the enemy, the Governments of Vietnam and the United States initiated a test defoliation project utilizing an aerial spray delivery system. While aerial spraying had been used commercially for many years, the military application of defoliants had been little studied, and their tactical value remained to be proven. The results of these test demonstrated that, given the proper conditions, this weapon system was extremely effective against the enemy's base camps and lines of communication, and could be used to enhance Allied military ground operations.

The political implications associated with chemical warfare are well known, and the RANCH HAND Project, as it came to be called, was carefully studied by the Governments involved. Missions were carefully selected and authority for their execution tightly controlled, until the results and the political impact could be evaluated. The results proved to be outstanding, and the decision was reached to make the program operational. Aerial defoliation then became another key part of the aerial support being provided Allied ground forces fighting for the freedom and liberty of South Vietnam.

The report which follows briefly recounts the exploits of the men and aircraft who have made the defoliation mission such an outstanding success.

ARTHUR F. McCONNELL, JR, Lt Colonel, USAF  
Commander  
12th Special Operations Squadron (RANCH HAND)

## MAJOR PROBLEM

The 12th SOS was originally assigned a primary mission, that of defoliation, which in itself is composed of three type missions - defoliation, crop destruction (resource control) and malaria control. The 315th Special Operation Wing arbitrarily imposed a second mission, that of airlift capability, since the 12th was one of the five tactical squadrons of the wing. The original assignment of the 12th to the 315th had its primary basis in the utilization of the same type of aircraft, the C-123, and the early attachment of the spray flight to the 309th Squadron.

The 7AF Operations Order assigning the primary mission to the 12th makes no mention of a secondary mission for the 12th SOS.

The defoliation mission and the airlift mission are incompatible. Altho the defoliation aircraft can be reconfigured for airlift missions, the resultant loss in primary mission effectiveness, plus the cost in training, maintenance man-hours used in conversion, and wear-and-tear on the aircraft, mitigate against assignment of a secondary mission.

Twice during 1968 the 12th was called upon to assist in tactical airlift. The first occasion, immediately following the TET offensive of February, was a time of actual emergency and the action was called for. The second time, in October, was not necessary and subjected the 12th to an unnecessary costly exercise.

The primary Ranch Hand mission is unique, highly discriminatory, specialized and deserving of 100% attention on the part of those assigned to it.

By virtue of assignment to the 315th SOW, the 12th SOS has been placed in an untenable position of split responsiveness. Operational control for target acquisition, coordination and primary mission accomplishment is exercised by MACV headquarters (Chemical Operations Division, COC). Operational requirements such as fighter escort and FAC support are directed by 7th AF Tactical Air Control Center. Thus operational control is direct and effective.

The Ranch Hands are located on Bien Hoa Air Base as a tenant unit. Maintenance and supply support are the responsibility of the 3rd Tactical Fighter Wing. The base CBPO is the servicing agency for personnel matters.

The 315th SOW is located at Phan Rang Air Base, approximately 150 air miles from Bien Hoa. Ground communications and mail service are

limited, sporadic and relatively inefficient for proper administration of the 12th SOS. The 315th SOW continually interposes personnel, logistic, maintenance and operational problems which many times have no bearing on the mission of the 12th SOS since they are predominately airlift oriented.

For example, the 12th SOS as a 25 UE unit is authorized 75 pilots. Each of the airlift squadrons are 16 UE units with a 40 pilot authorization. Ranch Hand assigned pilots undergo additional specialized training at Hurlburt AFB to prepare for the unique exacting mission. Yet the 315th SOW continually drafts pilots from the 12th when their pilot resources fall below minimums.

The solution to the problem of more efficient and effective handling of the Ranch Hand mission is to assign the squadron directly to 7AF and consolidate all reporting and administrative aspects in the 7AF TACC. There already exists a special office manned by three officers - two of whom are supplied from Ranch Hand after five months experience in the squadron - who could provide all the necessary policy guidance and staff assistance required. Maintenance, supply, logistical and personnel support would be unaffected. Administrative and operational effectiveness would be greatly improved as well as morale.



## U. S. COMMANDERS EVALUATION SOLICITED IN 1968

### **I CORPS**

Defoliation has provided for increased surveillance and the interdiction by fire of areas which previously offered concealment to enemy use. Ground troops have been assisted by increased observation permitting sweeps of larger areas and reduction of enemy ambush sites. Along LOC's operations have been facilitated by defoliation. Ambush sites have been exposed thereby considerably reducing enemy attacks on convoys. Defoliation along streams has assisted in the reduction of enemy use of these terrain features as LOC's and routes of infiltration by exposing them to aerial observation.

### **II CORPS**

Defoliation and crop destruction operations have been effective in enhancing the success of allied combat operations. The operations are normally limited to areas under VC/NVA control remote from population centers. The defoliation program has resulted in reduction of enemy concealment and permitted increased use of LOC's by friendly units. Aerial surveillance of enemy areas has improved and less security forces are required to control areas of responsibility. The destruction of enemy food supplies has resulted in some instances in the diversion of enemy troops to agricultural rather than combat duties. The VC/NVA collection of taxes and food from civilians, impressment of laborers and VC/NVA food shortage resulting from crop destruction caused several personnel to rally under the Chien Hoi program. An overall result of the herbicide program has been to increase friendly security and to assist in returning civilians to CVN control.

### **III CORPS**

Herbicide operations have contributed significantly to allied combat operations. Increased visibility afforded friendly forces and the concurrent denial of concealment to the enemy have been especially important. Large area defoliation has increased vertical visibility in hardwood forests from 75-80%. Similar improvements in visibility have been attained in double canopy jungle where successive missions have been flown. Aerial photos can be taken which "see to the ground" in areas previously obscured thus aiding visual reconnaissance. FAC's have discovered enemy bases in defoliated areas which had been previously unknown or overlooked. Defoliation has increased the security of friendly installations

and decreased the number of potential ambush sites available to the enemy. Defoliation of areas from which the enemy can establish mortar positions and rocket launch sites is particularly important. Defoliation also complements the land clearing program being carried out in this zone. Areas too wet or steep to cut are defoliated. Crop destruction denies local supplies of food to the enemy. The effort expended to destroy crops is negligible compared to the effort required to secure the same crops from enemy use or to destroy them by some other means.

#### IV CORPS

Without exception one successful defoliation mission has led to a deluge of requests for other areas in a given province. Each successful mission has caused the submission of 4-5 other targets for C-123 defoliation.

Defoliation operations have proved to be a useful tool. Herbicides have deprived the VC of cover and concealment, safeguarded waterways and highways, improved outpost security, and cleared fields of fire around fixed installations. It has also significantly reduced the need for large numbers of troops in areas adjacent to sprayed targets. In some areas defoliation operations provide virtually the only CVN pressure on the VC because of lack of mobility, high water and density of vegetation which makes ground military operations prohibitive in terms of manpower losses and assets required to sustain an operation. Defoliation operations concentrate the VC and restrict him to more accessible areas where the ARVN can find, fix and destroy the guerilla.

#### COMNAV

The Commander of Naval Forces, Vietnam, views the defoliation program as contributing directly to successful operations in the RSSZ. Prior to the defoliation program, air targets were completely camouflaged and detection practically impossible. The overhanging cover over many of the small streams allowed the VC virtually complete freedom of movement. Since the beginning of defoliation, the VC have had to actively camouflage their facilities. The increase in tactical air operations is illustrated by the change in bomb damage assessment which went from no evaluation to the following, for a six month period:

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The net results of comments from U.S. and CVN commanders are all favorable, and they, without exception, ask for more herbicide sorties than the program can deliver at the moment or in the near future.

## OTHER INDICATORS OF EFFECTIVENESS

There is a vivid improvement in ability to find routes of travel, bunkers, structures and defenses after the foliage cover has been removed.

War Zones C and D have been heavily defoliated. Prior to defoliation, 7 brigades were necessary to maintain US/GVN presence in War Zone C. After defoliation, only 3 were required. In War Zone D, only one brigade has been necessary (after defoliation). Plans called for a 2 1/2 division size effort to be conducted. The defoliation negated the need for the operation. These two examples point up the value of the operations to date and give credence for the continuation of the defoliation program.

In summary, the program does what it is intended to do. The routes of movement are being revealed, the hiding places for the VC are being eliminated. The VC are thus forced to divert resources to non-combatant tasks (moving base camps, waiting for hours of darkness, etc.) because of the defoliation program. And finally, the number of trucks and troops lost in ambushes is decreasing because of the defoliation operations.

## INTRODUCTION

Since the inception of defoliation spray operations in South Vietnam, crewmembers dedicated to the RANCH HAND mission and to assisting the South Vietnamese Government to achieve peace and freedom for their Nation, have flown their unarmed UC-123 defoliation aircraft throughout the country - from the Delta to the Demilitarized Zone, from the Laotian and Cambodian borders to the South China Sea.

Between the date of the first RANCH HAND flight, in January, 1962, and October 1st, 1968, defoliation crews compiled a total of over 18,000 combat sorties, all of which were flown under the extremely difficult and hazardous circumstances associated with defoliation work. With rare exception, target areas were occupied and/or utilized by unfriendly forces and consisted primarily of hostile base camps and lines of communication, as well as selected crop targets. Because of the sensitivity of the defoliants being applied, and to insure maximum effectiveness, aircrews were required to fly their aircraft in close formation at an altitude only 100 feet above the terrain and at a constant 130 knots indicated airspeed. This low altitude and airspeed greatly restricted aircraft maneuverability and placed the aircrews in an extremely hazardous and vulnerable position. This is underscored by the fact that this one Unit received a total of well over 3,000 hits from hostile weapons fire during the period cited above. Yet without hesitation, and with complete disregard for their personal safety, in an outstanding display of courage and determination, these combat crews daily flew into one hostile environment after another, and laid their defoliant with outstanding precision.

The unique role played by the Unit in Southeast Asia has bred an esprit de corps among its members that is known and respected throughout their area of operations. Taking immense pride in their mission, their aircraft, and their uniform, the RANCH HAND crews have displayed gallantry and courage of a nature which far exceeds the meaning of these words. With full knowledge of the importance of their work, as well as its hazardous nature, they have continued on countless target runs while receiving intense and accurate hostile ground fire, in order to complete their assigned mission. Under circumstances far beyond those which challenge most combat crewmembers, in situations wherein their aircraft have been badly damaged and crewmembers wounded, in situations where the target runs could have been abandoned without fear of any criticism, the spray crews have continued their work, and remained "on target". By so doing, they have significantly increased the capability of aerial observers to monitor hostile force movements and direct fighter-bomber strikes

against them, and more importantly, they have provided Allied ground forces with protection against sneak attack, by depriving enemy troops of valuable ambush positions. In essence, they have enhanced the combat effectiveness of Allied air and ground forces fighting in Vietnam.

The obvious corollary to a successful air mission is a successful ground operation, and the dedication of Unit maintenance crews in preparing the aircraft for flight, in continually repairing battle damaged aircraft and returning them to operational status in minimum time, is equally responsible for the success enjoyed by the RANCH HAND mission.

With admirable zeal and determination, every member of this Unit has performed his duties far and beyond that which was expected of him, and their spirit and devotion to the mission have become a legend in Southeast Asia.

The tenacity and courage displayed by this Unit, coupled with an intense pride in their accomplishments, reflect the greatest credit upon its members and the United States Air Force. Their efforts have perhaps best been summed up in a recent issue of the Ordnance Association Magazine: "... (they) have written a new annal in the history of aerial flight."

The information which follows is designed to amplify the history, operations and achievements of the 12th Special Operations Squadron.

## OPERATIONAL HISTORY

The use of air-delivered chemical defoliants as a tactical weapon evoked considerable interest as early as 1945, and was employed with a fair degree of effectiveness by British forces operating in Malaya during the late 1940's. In this instance they used helicopters to apply the defoliant along lines of communication. It was not until 1958-9, however, that the United States undertook any large scale testing in this area. In that year, an extensive evaluation program was initiated by the United States, in conjunction with the Government of Thailand. As a result of this test series, several acceptable defoliants and delivery techniques were selected for further consideration.

### Special Aerial Spray Flight

By late 1961, an operational test program (initially called Project FARM GATE) was approved for the United States Air Force. With the full concurrence and support of the Government of the Republic of Vietnam, and the Vietnamese Air Force, this project, under the new code name RANCH HAND, began trial operations in January, 1962, with three especially equipped C-123 aircraft based at Tan Son Nhut Airport, Saigon, RVN. The initial unit designation was the Special Aerial Spray Flight. Because of the newness and uniqueness of this weapons system, the volunteer crews assigned to the RANCH HAND project were forced to design their own concept of operations and an entire range of tactics and delivery techniques. Learning by trial and error, constantly innovating and modifying, the crews slowly developed a highly effective defoliant delivery operation which was geared to the varied tropical vegetation, foliage and terrain of Southeast Asia.

By June, 1962, the crews of the Special Aerial Spray Flight were ready to fly tactical missions, and it was not long before the merits of this delivery system were proven. A notable effort occurred a few months later, when, in October, 1962, the crews successfully completed their first large-scale defoliation mission, on the Cau Mau Peninsula in the Mekong River delta. This project was personally observed and evaluated by the Chief of the U. S. Army Chemical Corps, and the results were reported to be "outstanding".

Throughout the next few years, however, defoliation operations were mostly conducted on a moderate scale, although by mid-1964, authority had been received to expand project coverage and to establish limited operations from Da Nang Air Base, RVN. The program was proving its worth wherever aerial defoliation methods were employed, and new target requests were constantly being received. After studying the results of

actual missions, it was determined that an altitude of 100 feet above the terrain, at a speed of approximately 130 knots indicated, provided the most effective and efficient delivery of the defoliant, in spite of the fact that to maneuver an unarmed cargo aircraft at such a low altitude and low airspeed was, at best, difficult. As hostile ground fire became an ever-present reality, the mission became extremely hazardous. Because of these factors, the heroic efforts of the early spray crews were not without cost. In February 1962, the defoliation unit suffered its first combat loss when a C-123 aircraft and its crew of five were felled by enemy ground fire. Since the concept of assigning fighter aircraft to escort and support the defoliation project had not yet been developed, the spray aircraft were entirely defenseless. However, despite the considerable number of problems inherent in their mission, the valiant RANCH HAND crews delivered increasing amounts of defoliant on targets located throughout the country.

In July, 1964, a new challenge was delivered to the RANCH HAND crews, when the Governments of the Republic of Vietnam and the United States mutually agreed to initiate crop destruction missions against targets specifically selected by the Vietnamese Government. This program was continued through the years that followed, and has proven a vital adjunct to ground force operations, by both denying food sources to the enemy and their sympathizers, and by requiring the enemy to divert military personnel from the battlefield into the food production area.

Despite the fact that RANCH HAND aircraft were continuing to receive heavy automatic weapons fire from hostile ground locations with increasing regularity, it was not until January 1965, that approval was granted to prestrike targets with fighter aircraft, and to provide a fighter escort for the spray aircraft. This occurred during Operation "Sherwood Forest", a massive attempt to burn out a defoliated section of the Boi Loi Woods, in the hopes of denying the enemy an extremely vital base camp area. From this point forward, close-in fighter support has been a vital part of the defoliation program and has made a significant contribution towards minimizing the effect of unfriendly ground fire against the defoliation aircraft, although it could not entirely eliminate the subsequent losses of additional aircraft and crews.

It is interesting to note that, during this period and for the next year, several "fire storm" projects, similar to the Boi Loi Woods effort, were made in conjunction with the Vietnamese Air Force. While the attempts to ignite the defoliated areas met with limited success, the effect of the defoliant itself significantly improved visibility for observation in each of the project areas.



Operations continued to increase during 1965, with the Special Aerial Spray Flight successfully completing defoliation of a number of critical target areas. Particularly noteworthy was the unit's work in the Rung Sat Special Zone, a dense mangrove-covered swamp located along the main shipping channels into Saigon. Because of the excellent cover afforded by the mangrove swamp, hostile forces operated with near-impunity throughout the area, and constantly harassed allied shipping into and out of the Capitol City. Therefore, in March, 1965, Rung Sat was placed on the list of critical targets, and in the weeks that followed, spray crews delivered over 77,000 gallons of defoliant on the target while flying some 42 missions into the area. The results must rank as one of the most successful projects carried out by RANCH HAND crews, as they laid the land completely barren, thereby permitting friendly forces to sweep the area and secure the shipping channels against further enemy encroachment.

Another vital target received during this period was War Zone "D". In spite of heavy hostile troop concentration within the target area, and almost continuous ground fire, the spray crews returned again and again, until the project was successfully completed. Still another accomplishment worthy of note was the defoliation of the Ho Chi Minh Trail utilizing aircraft staged out of Da Nang Air Base. Our intelligence source credits the destruction of approximately 1,000 enemy trucks to the successful defoliation effort which opened up roads and trails in the area, thereby permitting fighter aircraft to accurately deliver their munitions.

#### 12th Air Commando Squadron

Because of a greatly increased demand for defoliation throughout South Vietnam, the United States Government directed that the RANCH HAND program was to be expanded, and on 15 October 1966, the 12th Air Commando Squadron (RANCH HAND - VIETNAM) became an administrative and operational reality. Initially equipped with 18 UC-123 spray aircraft, the crews (all hand-picked volunteers) quickly established an outstanding reputation throughout South Vietnam.

Several important events occurred in the months which followed the establishment of the 12th ACS, including approval to assign one aircraft into Operation "Flyswatter", a program designed to deliver insecticides over various populated areas located throughout the country, in order to control the malaria-carrying mosquito, as well as other disease-bearing insects. Using techniques similar to those employed in defoliation, the insecticide aircraft and its crews have made an outstanding contribution to the health and welfare of the people of Vietnam, by controlling and preventing many diseases through their spray efforts.

By late 1966, the 12th Air Commando Squadron had significantly increased its defoliation operations, and received another key project when the southern half of the Demilitarized Zone (DMZ) was approved for targeting. The outstanding results achieved in this project (and six months later, when the northern half of the DMZ was also approved) are still much in evidence today. Flying over extremely flat terrain, and visible for many miles throughout the target run, the RANCH HAND crews courageously defied great odds to place their defoliant precisely on the briefed targets. As a result of these operations, much of the DMZ was laid bare, and the enemy was denied ready access to his hitherto secure infiltration and supply routes into South Vietnam.

In December, 1966, as RANCH HAND crews continued on their country-wide defoliation schedule, the 12th Air Commando Squadron moved to Bien Hoa Air Base, RVN, which remains today its operational headquarters.

During early 1967, the main areas of activity were taking place in War Zones C and D, while Da Nang based aircraft concentrated on targets near the Laotian border and in the southern portion of the DMZ. One of the highlights of this period was Operation "Pink Rose", the third jungle-burning project carried out by RANCH HAND crews. In support of this project, the Unit flew approximately 225 sorties and delivered over a quarter million gallons of herbicide on selected target areas in War Zones C and D, successfully completing their part in the project in April, 1967.

Target areas throughout the country were sprayed during the remainder of this period, with particular emphasis being placed on vital targets in the Corps area. This accounted for the significant increase in hits received during 1967.

The flexibility of the 12th Air Commando Squadron was severely tested in February, 1968, when, in the throes of the communist Tet offensive, the unit was directed to assume an airlift role under the direction of its parent wing, the 315th Air Commando Wing. Accepting the challenge, the RANCH HAND team stripped the aircraft of all defoliation equipment, including tanks, spray booms and plumbing, and reported in, "ready to go", in the amazing time of only 24 hours. During the weeks which followed, crews of the 12th flew a total of 2866 productive sorties as they performed their airlift role with the same professionalism and zeal which have become the RANCH HAND trademark.

With the Tet offensive successfully blunted, the UC-123 aircraft were restored to their defoliation mission, and again, in minimum time, maintenance teams reconfigured the aircraft and spray operations resumed shortly thereafter.

The remainder of 1968 reflected a continuing increase in the amounts of herbicides dispensed and experimental testing of new formations and tactics. Also, in order to take advantage of seasonal weather in spraying priority targets in I Corps, a significant increase was made in the size of the detachment operating from Da Nang Air Base, and the sortie rate doubled. RANCH HAND crews operating from this forward base flew highly successful defoliation missions against some of the most heavily defended areas in South Vietnam, including the A Shau Valley, Khe Sanh and Route 9, and along the Laotian and Cambodian borders as far south as Pleiku. In defiance of the rugged mountain terrain and accurate enemy anti-aircraft fire which faced them, the defoliation crews went in again and again, against these vital targets in order to open them up for aerial observation; in all cases, the results were outstanding.

As the number of missions increased, so did the exposure to enemy ground fire. In May, 1968, while making a defoliation run on a heavily defended enemy base camp area in the Mekong Delta, a RANCH HAND formation came under severe and accurate automatic weapons fire. The number two aircraft in the formation received a number of direct hits which caused one engine to explode, and the aircraft and its gallant crew were lost as they made a vain attempt to save their aircraft.

Briefly then, this is the history of the RANCH HAND operation. Redesignated the 12th Special Operations Squadron in August, 1968, this unit has established an enviable and proud history, written with the toil and sweat, and blood, of the officers and airmen assigned to the defoliation mission. Although the personnel change, each man in turn has become imbued with the desire, spirit and courage of his predecessors, and this dedication and devotion to duty, and to the spray mission in Vietnam, has proved inviolable.

## RANCH HAND MISSION STATISTICS

### DEFOLIATION

During the period being cited, crews of the 12th Special Operations Squadron amassed the following mission achievements:

<u>YEAR</u>	<u>COMBAT SORTIES</u>	<u>HERBICIDE DELIVERED (Gallons)</u>
1962	60	49,240
1963	107	89,282
1964	273	218,510
1965	468	262,700
1966	2439	4,288,320
1967	7096	5,045,545
1968	7911*	3,520,705*
	<u>16,354</u>	

(\* The 1968 figures include a total of 1866 combat airlift sorties flown in support of Allied forces during the Tet offensive. The diversion of aircraft into the airlift role significantly reduced the herbicide sprayed during the months of February and March.)

### INSECTICIDE

Crewmembers assigned to Operation "Fly Swatter", the special insecticide delivery operation conducted by the 12th Special Operations Squadron, have sprayed the following quantities of insecticide in the support of continuing effort to eliminate and control disease-bearing insects in South Vietnam:

<u>YEAR</u>	<u>INSECTICIDE DELIVERED</u>
1966	(Figures not available)
1967	118,985
1968	111,998

## BATTLE DAMAGE

During the period cited in this document, the crews and aircraft of the 12th Special Operations Squadron (RANCH HAND) have achieved the distinction of being the unit most heavily hit by hostile fire during the Vietnam conflict. In July, 1968, the RANCH HAND crews passed the 3,000th hit mark, with no let-up in sight. Following is a compilation of hits received from enemy ground fire:

<u>YEAR</u>	<u>NUMBER OF CONFIRMED HITS</u>
1962 - 63	465
1964	194
1965	156
1966	885
1967	1017
1968*	426

\* (Figures for 1968 reflect the period from 1 January through 1 October)

## COMBAT LOSSES

The very nature of the RANCH HAND mission, and the environment within which it is flown, requires the highest degree of professionalism and aerial skill. But most of all, it requires a rare standard of bravery and courage, and when necessary, the supreme sacrifice. The men of the 12th Special Operations Squadron have willingly accepted their mission, knowing full well its hazards, because of their sincere belief in the cause to which the Government of the United States is so deeply committed - freedom for the people of the Republic of Vietnam. In support of this great cause, the following combat losses have been sustained by this Unit:

February, 1962	Aircraft lost with three crewmembers
May, 1962	Aircraft lost; crewmembers rescued
June, 1966	Aircraft lost; crewmembers rescued
October, 1966	Aircraft lost; crewmembers rescued
January, 1967	Aircraft lost with five crewmembers
May, 1967	One crewmember lost; aircraft recovered
July, 1967	Aircraft lost with four crewmembers
September, 1967	Aircraft lost with four crewmembers
May, 1968	Aircraft lost with three crewmembers

The sacrifice of the 18 RANCH HAND crewmembers killed in action in South Vietnam during this period, has served to inspire those who served with them, to pursue with increased vigor the mission given them, and to insure that these losses were not made in vain.

## ENEMY STATEMENTS

The data presented here comes mainly from the statements made by the VC or their sympathizers during interviews or interrogations conducted after capture.

A VC POW observed that after a base area, located in sparsely vegetated areas, had been sprayed, the camp would be moved. The move was not very difficult. Each man would pick up his hammock and backpack and walk about 3 hours to the new camp location. If the base camp was located in heavy canopy, the branches of the trees, even though devoid of leaves, would protect them from observation from the air. This last indicating that observation from the air is to be avoided by the VC. Another POW stated that defoliated areas presented obstacles to the VC in movements and stationing of troops. These areas had to be avoided for nearly a year before they could be reused. The defoliation has seriously hampered or made more difficult the movement of the VC due to their dislike for favorable air observation. When it is necessary to cross a defoliated area, enroute to an objective, the VC wait for night-fall or cross singly -- either course of action delaying the movement. When it is necessary to cross small defoliated areas, they may well cross in the daylight provided the unit can assure itself that no aircraft are in the vicinity. With regard to the defoliation along GVN LOC'S, the VC have published orders making the removal of brush and trees along roads and waterways a punishable offense. The defoliation and subsequent removal of vegetation along such lines of communication would therefore be a prudent exercise. The VC do make use of the cover along roads and waterways for hiding places from which to initiate ambushes. If this part of the program has any merit or profit to US/GVN efforts, there should be a decrease in the number of incidents along defoliated portions of the LOC and that decrease should become apparent immediately after defoliation has taken effect -- I. E., the leaves have fallen.

What then is the record for incidents along defoliated LOC'S as compared to undefoliated LOC'S? There are definite advantages to be accrued from the defoliation program, particularly along the LOC'S of South Vietnam. In one instance, no ambushes or incidents occurred after the defoliation. In another, there were only 11 in a 4 month period. And in a third, the number of incidents decreased from 6 in 4 months to 4 in 6 months. During this same time period, the amount of traffic along these roads remained constant or increased. Thus the defoliation served to provide for a dramatic decrease in the incident rate while at the same time the potential for ambush (traffic) increased. The defoliation along <sup>or</sup> river caused the VC to evacuate their sheltered positions along the bank. The defoliation along another river caused at least 3 ambush attempts to be unsuccessful in a region where ambushes were regular before the defoliation.

## HISTORICAL ITEM FROM A MACV DOCUMENT:

In early 1961 the Republic of Vietnam Development Test Center was established. This was supported by a United States Research and Development Field Unit of the Office of the Secretary of Defense/Advanced Research Projects Agency (OSD/ARPA). Among the projects assigned this unit were Tasks 2 and 20 which dealt with the evaluation of crop destruction and defoliation materials and techniques. Based on the promising results of early tests approval was sought for expanded aerial defoliation trials. Approval was granted and C-123 aircraft made available in December 1961. Tests were conducted in January and February 1962 and an evaluation report submitted in May 1962. Following Department of Defense and State Department approval aerial defoliation operations began in Cau Mau. These trials began on 3 September 1962 and were completed on 11 October 1962. Based on the results of this operation action was taken to establish an aerial herbicide operational capability in the Republic of Vietnam.



HAVE YOU READ THIS

## INTRODUCTION

Since the inception of defoliation spray operations in South Vietnam, crewmembers dedicated to the RANCH HAND mission and to assisting the South Vietnamese Government to achieve peace and freedom for their Nation, have flown their unarmed UC-123 defoliation aircraft throughout the country - from the Delta to the Demilitarized Zone, from the Laotian and Cambodian borders to the South China Sea.

Between the date of the first RANCH HAND flight, in January, 1962, and October 1st, 1968, defoliation crews compiled a total of over 18,000 combat sorties, all of which were flown under the extremely difficult and hazardous circumstances associated with defoliation work. With rare exception, target areas were occupied and/or utilized by unfriendly forces and consisted primarily of hostile base camps and lines of communication, as well as selected crop targets. Because of the sensitivity of the defoliants being applied, and to insure maximum effectiveness, aircrews were required to fly their aircraft in close formation at an altitude only 100 feet above the terrain and at a constant 130 knots indicated airspeed. This low altitude and airspeed greatly restricted aircraft maneuverability and placed the aircrews in an extremely hazardous and vulnerable position. This is underscored by the fact that this one Unit received a total of well over 3,000 hits from hostile weapons fire during the period cited above. Yet without hesitation, and with complete disregard for their personal safety, in an outstanding display of courage and determination, these combat crews daily flew into one hostile environment after another, and laid their defoliant with outstanding precision.

The unique role played by the Unit in Southeast Asia has bred an esprit de corps among its members that is known and respected throughout their area of operations. Taking immense pride in their mission, their aircraft, and their uniform, the RANCH HAND crews have displayed gallantry and courage of a nature which far exceeds the meaning of these words. With full knowledge of the importance of their work, as well as its hazardous nature, they have continued on countless target runs while receiving intense and accurate hostile ground fire, in order to complete their assigned mission. Under circumstances far beyond those which challenge most combat crewmembers, in situations wherein their aircraft have been badly damaged and crewmembers wounded, in situations where the target runs could have been abandoned without fear of any criticism, the spray crews have continued their work, and remained "on target". By so doing, they have significantly increased the capability of aerial observers to monitor hostile force movements and direct fighter-bomber strikes

against them, and more importantly, they have provided Allied ground forces with protection against sneak attack, by depriving enemy troops of valuable ambush positions. In essence, they have enhanced the combat effectiveness of Allied air and ground forces fighting in Vietnam.

The obvious corollary to a successful air mission is a successful ground operation, and the dedication of Unit maintenance crews in preparing the aircraft for flight, in continually repairing battle damaged aircraft and returning them to operational status in minimum time, is equally responsible for the success enjoyed by the RANCH HAND mission.

With admirable zeal and determination, every member of this Unit has performed his duties far and beyond that which was expected of him, and their spirit and devotion to the mission have become a legend in Southeast Asia.

The tenacity and courage displayed by this Unit, coupled with an intense pride in their accomplishments, reflect the greatest credit upon its members and the United States Air Force. Their efforts have perhaps best been summed up in a recent issue of the Ordnance Association Magazine: "... (they) have written a new annal in the history of aerial flight."

The information which follows is designed to amplify the history, operations and achievements of the 12th Special Operations Squadron.

## OPERATIONAL HISTORY

The use of air-delivered chemical defoliants as a tactical weapon evoked considerable interest as early as 1945, and was employed with a fair degree of effectiveness by British forces operating in Malaya during the late 1940's. In this instance they used helicopters to apply the defoliant along lines of communication. It was not until 1958-9, however, that the United States undertook any large scale testing in this area. In that year, an extensive evaluation program was initiated by the United States, in conjunction with the Government of Thailand. As a result of this test series, several acceptable defoliants and delivery techniques were selected for further consideration.

### Special Aerial Spray Flight

By late 1961, an operational test program (initially called Project FARM GATE) was approved for the United States Air Force. With the full concurrence and support of the Government of the Republic of Vietnam, and the Vietnamese Air Force, this project, under the new code name RANCH HAND, began trial operations in January, 1962, with three especially equipped C-123 aircraft based at Tan Son Nhut Airport, Saigon, RVN. The initial unit designation was the Special Aerial Spray Flight. Because of the newness and uniqueness of this weapons system, the volunteer crews assigned to the RANCH HAND project were forced to design their own concept of operations and an entire range of tactics and delivery techniques. Learning by trial and error, constantly innovating and modifying, the crews slowly developed a highly effective defoliant delivery operation which was geared to the varied tropical vegetation, foliage and terrain of Southeast Asia.

By June, 1962, the crews of the Special Aerial Spray Flight were ready to fly tactical missions, and it was not long before the merits of this delivery system were proven. A notable effort occurred a few months later, when, in October, 1962, the crews successfully completed their first large-scale defoliation mission, on the Cau Mau Peninsula in the Mekong River delta. This project was personally observed and evaluated by the Chief of the U. S. Army Chemical Corps, and the result were reported to be "outstanding".

Throughout the next few years, however, defoliation operations were mostly conducted on a moderate scale, although by mid-1964, authority had been received to expand project coverage and to establish limited operations from Da Nang Air Base, RVN. The program was proving its worth wherever aerial defoliation methods were employed, and new target requests were constantly being received. After studying the results of

actual missions, it was determined that an altitude of 100 feet above the terrain, at a speed of approximately 130 knots indicated, provided the most effective and efficient delivery of the defoliant, in spite of the fact that to maneuver an unarmed cargo aircraft at such a low altitude and low airspeed was, at best, difficult. As hostile ground fire became an ever present reality, the mission became extremely hazardous. Because of these factors, the heroic efforts of the early spray crews were not without cost. In February 1962, the defoliation unit suffered its first combat loss when a C-123 aircraft and its crew of five were felled by enemy ground fire. Since the concept of assigning fighter aircraft to escort and support the defoliation project had not yet been developed, the spray aircraft were entirely defenseless. However, despite the considerable number of problems inherent in their mission, the valiant RANCH HAND crews delivered increasing amounts of defoliant on targets located throughout the country.

In July, 1964, a new challenge was delivered to the RANCH HAND crews when the Governments of the Republic of Vietnam and the United States mutually agreed to initiate crop destruction missions against targets specifically selected by the Vietnamese Government. This program was continued through the years that followed, and has proven a vital adjunct to ground force operations, by both denying food sources to the enemy and their sympathizers, and by requiring the enemy to divert military personnel from the battlefield into the food production area.

Despite the fact that RANCH HAND aircraft were continuing to receive heavy automatic weapons fire from hostile ground locations with increasing regularity, it was not until January 1965, that approval was granted to prestrike targets with fighter aircraft, and to provide a fighter escort for the spray aircraft. This occurred during Operation "Sherwood Forest", a massive attempt to burn out a defoliated section of the Boi Loi Woods, in the hopes of denying the enemy an extremely vital base camp area. From this point forward, close-in fighter support has been a vital part of the defoliation program and has made a significant contribution towards minimizing the effect of unfriendly ground fire against the defoliation aircraft, although it could not entirely eliminate the subsequent losses of additional aircraft and crews.

It is interesting to note that, during this period and for the next year, several "fire storm" projects, similar to the Boi Loi Woods effort, were made in conjunction with the Vietnamese Air Force. While the attempts to ignite the defoliated areas met with limited success, the effect of the defoliant itself significantly improved visibility for observation in each of the project areas.

Operations continued to increase during 1965, with the Special Aerial Spray Flight successfully completing defoliation of a number of critical target areas. Particularly noteworthy was the unit's work in the Rung Sat Special Zone, a dense mangrove-covered swamp located along the main shipping channels into Saigon. Because of the excellent cover afforded by the mangrove swamp, hostile forces operated with near impunity throughout the area, and constantly harassed allied shipping into and out of the Capital City. Therefore, in March, 1965, Rung Sat was placed on the list of critical targets, and in the weeks that followed spray crews delivered over 77,000 gallons of defoliant on the target while flying some 42 missions into the area. The results must rank as one of the most successful projects carried out by RANCH HAND crews, as they laid the land completely barren, thereby permitting friendly forces to sweep the area and secure the shipping channels against further enemy encroachment.

Another vital target received during this period was War Zone "D". In spite of heavy hostile troop concentration within the target area and almost continuous ground fire, the spray crews returned again and again, until the project was successfully completed. Still another accomplishment worthy of note was the defoliation of the Ho Chi Minh Trail utilizing aircraft staged out of Da Nang Air Base. Our intelligence source credits the destruction of approximately 1,000 enemy trucks to the successful defoliation effort which opened up roads and trails in the area, thereby permitting fighter aircraft to accurately deliver their munitions.

#### 12th Air Commando Squadron

Because of a greatly increased demand for defoliation throughout South Vietnam, the United States Government directed that the RANCH HAND program was to be expanded, and on 15 October 1966, the 12th Air Commando Squadron (RANCH HAND - VIETNAM) became an administrative and operational reality. Initially equipped with 18 UC-123 spray aircraft, the crews (all hand-picked volunteers) quickly established an outstanding reputation throughout South Vietnam.

Several important events occurred in the months which followed the establishment of the 12th ACS, including approval to assign one aircraft into Operation "Flyswatter", a program designed to deliver insecticides over various populated areas located throughout the country, in order to control the malaria-carrying mosquito as well as other disease-bearing insects. Using techniques similar to those employed in defoliation, the insecticide aircraft and its crews have made an outstanding contribution to the health and welfare of the people of Vietnam, by controlling and preventing many diseases through their spray efforts.

By late 1965, the 12th Air Commando Squadron had significantly increased its defoliation operations and received another key project when the southern half of the Demilitarized Zone (DMZ) was approved for targeting. The outstanding results achieved in this project (and six months later when the northern half of the DMZ was also approved) are still much in evidence today. Flying over extremely flat terrain, and visible for many miles throughout the target run, the RANCH HAND crews courageously defied great odds to place their defoliant precisely on the briefed targets. As a result of these operations, much of the DMZ was laid bare and the enemy was denied ready access to his hitherto secure infiltration and supply routes into South Vietnam.

In December, 1966, as RANCH HAND crews continued on their country-wide defoliation schedule, the 12th Air Commando Squadron moved to Bien Hoa Air Base, RVN, which remains today its operational headquarters.

During early 1967, the main areas of activity were taking place in War Zones C and D, while Da Nang based aircraft concentrated on targets near the Laotian border and in the southern portion of the DMZ. One of the highlights of this period was Operation "Pink Rose", the third jungle-burning project carried out by RANCH HAND crews. In support of this project, the Unit flew approximately 225 sorties and delivered over a quarter million gallons of herbicide on selected target areas in War Zones C and D successfully completing their part in the project in April, 1967.

Target areas throughout the country were sprayed during the remainder of this period, with particular emphasis being placed on vital targets in the Corps area. This accounted for the significant increase in hits received during 1967.

The flexibility of the 12th Air Commando Squadron was severely tested in February, 1968, when, in the throes of the communist Tet offensive, the unit was directed to assume an airlift role under the direction of its parent wing, the 315th Air Commando Wing. Accepting the challenge, the RANCH HAND team stripped the aircraft of all defoliation equipment, including tanks, spray booms and plumbing, and reported in, "ready to go", in the amazing time of only 24 hours. During the weeks which followed, crews of the 12th flew a total of 2866 productive sorties as they performed their airlift role with the same professionalism and zeal which have become the RANCH HAND trademark.

With the Tet offensive successfully blunted, the UC-123 aircraft were restored to their defoliation mission, and again, in minimum time, maintenance teams reconfigured the aircraft and spray operations resumed shortly thereafter.

The remainder of 1968 reflected a continuing increase in the amounts of herbicides dispensed and experimental testing of new formations and tactics. Also, in order to take advantage of seasonal weather in spraying priority targets in I Corps a significant increase was made in the size of the detachment operating from Da Nang Air Base and the sortie rate doubled. RANCH HAND crews operating from this forward base flew highly successful defoliation missions against some of the most heavily defended areas in South Vietnam, including the A Shau Valley, Khe Sanh and Route 9, and along the Laotian and Cambodian borders as far south as Pleiku. In defiance of the rugged mountain terrain and accurate enemy anti-aircraft fire which faced them, the defoliation crews went in again and again, against these vital targets in order to open them up for aerial observation; in all cases the results were outstanding.

As the number of missions increased, so did the exposure to enemy ground fire. In May, 1968, while making a defoliation run on a heavily defended enemy base camp area in the Mekong Delta a RANCH HAND formation came under severe and accurate automatic weapons fire. The number two aircraft in the formation received a number of direct hits which caused one engine to explode, and the aircraft and its gallant crew were lost as they made a vain attempt to save their aircraft.

Briefly then, this is the history of the RANCH HAND operation. Re-designated the 12th Special Operations Squadron in August 1968 this unit has established an enviable and proud history, written with the toll and sweat, and blood, of the officers and airmen assigned to the defoliation mission. Although the personnel change, each man in turn has become imbued with the desire, spirit and courage of his predecessors and this dedication and devotion to duty, and to the spray mission in Vietnam, has proved inviolable.

## COMBAT LOSSES

The very nature of the RANCH HAND mission, and the environment within which it is flown, requires the highest degree of professionalism and aerial skill. But most of all, it requires a rare standard of bravery and courage, and when necessary, the supreme sacrifice. The men of the 12th Special Operations Squadron have willingly accepted their mission, knowing full well its hazards, because of their sincere belief in the cause to which the Government of the United States is so deeply committed - freedom for the people of the Republic of Vietnam. In support of this great cause, the following combat losses have been sustained by this Unit:

February, 1962	Aircraft lost with three crewmembers
May, 1962	Aircraft lost; crewmembers rescued
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WITH THEM

The sacrifice of the 18 RANCH HAND crewmembers killed in action in South Vietnam during this period, has served to inspire those who served with them, to pursue with increased vigor the mission given them; and to insure that these losses were not made in vain.



BATTLE RECORD

During the period cited in this document, the crews and aircraft of the 12th Special Operations Squadron (HARSH HAND) have achieved the distinction of being the unit most heavily hit by hostile fire during the Vietnam conflict. In July, 1968, the HARSH HAND crew passed the 3,000th hit mark, with no let-up in sight. Following is a compilation of hits received from enemy ground fire:

<u>YEAR</u>	<u>NUMBER OF CONFIRMED HITS</u>
1962 - 63	465
1964	194
1965	156
1966	885
1967	1017
1968*	426

\* (Figures for 1968 reflect the period from 1 January through 1 October)

## RANCH HAND MISSION STATISTICS

### DEFOLIATION

During the period being cited, crews of the 12th Special Operations Squadron amassed the following mission achievements:

<u>YEAR</u>	<u>COMBAT SORTIES</u>	<u>HERBICIDE SPRAYED (Gall.)</u>
1962	60	49,240
1963	107	89,232
1964	273	218,510
1965	468	262,700
1966	2439	4,288,320
1967	7096	5,045,545
1968	7911*	3,520,705*
	<u>16,354</u>	

(\* The 1968 figures include a total of 1866 combat airlift sorties flown in support of Allied forces during the Tet offensive. The diversion of aircraft into the airlift role significantly reduced the herbicide sprayed during the months of February and March.)

### INSECTICIDE

Crewmembers assigned to Operation "Fly Swatter", the special insecticide delivery operation conducted by the 12th Special Operations Squadron, have sprayed the following quantities of insecticide in/ the support of continuing effort to eliminate and control disease-bearing insects in South Vietnam:

<u>YEAR</u>	<u>INSECTICIDE DELIVERED</u>
1966	(Figures not available)
1967	118,985
1968	111,998

## ENEMY STATEMENTS

The data presented here comes mainly from the statements made by the VC or their sympathizers during interviews or interrogations conducted after capture.

A VC POW observed that after a base area, located in sparsely vegetated areas, had been sprayed, the camp would be moved. The move was not very difficult. Each man would pick up his hammock and backpack and walk about 3 hours to the new camp location. If the base camp was located in heavy canopy, the branches of the trees, even though devoid of leaves, would protect them from observation from the air. This last indicating that observation from the air is to be avoided by the VC. Another POW stated that defoliated areas presented obstacles to the VC in movements and stationing of troops. These areas had to be avoided for nearly a year before they could be reused. The defoliation has seriously hampered or made more difficult the movement of the VC due to their dislike for favorable air observation. When it is necessary to cross a defoliated area enroute to an objective, the VC wait for night-fall or cross singly -- either course of action delaying the movement. When it is necessary to cross small defoliated areas, they may well cross in the daylight provided the unit can assure itself that no aircraft are in the vicinity. With regard to the defoliation along GVN LOC'S, the VC have published orders making the removal of brush and trees along roads and waterways a punishable offense. The defoliation and subsequent removal of vegetation along such lines of communication would therefore be a prudent exercise. The VC do make use of the cover along roads and waterways for hiding places from which to initiate ambushes. If this part of the program has any merit or profit to US/GVN efforts, there should be a decrease in the number of incidents along defoliated portions of the LOC and that decrease should become apparent immediately after defoliation has taken effect -- I. E., the leaves have fallen.

What then is the record for incidents along defoliated LOC'S as compared to undefoliated LOC'S? There are definite advantages to be accrued from the defoliation program, particularly along the LOC'S of South Vietnam. In one instance, no ambushes or incidents occurred after the defoliation. In another, there were only 11 in a 4 month period. And in a third, the number of incidents decreased from 6 in 4 months to 4 in 6 months. During this same time period, the amount of traffic along these roads remained constant or increased. Thus the defoliation served to provide for a dramatic decrease in the incident rate while at the same time the potential for ambush (traffic) increased. The defoliation along river caused the VC to evacuate sheltered positions along the bank. The defoliation along another river caused at least 3 ambush attempts to be unsuccessful in a region where ambushes were regular before the defoliation.

This is the personal recollections of Arthur F. McConnell, Jr.,  
Lieutenant Colonel, USAF Ret., of his service with the 12th ACS in  
Vietnam, January 1968-January 1969. McConnell served as commander  
of the specialized squadron of spray planes. A copy of these recollection  
lections and permission to use them were furnished to Paul F. Cecil  
on 17 September 1982.

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RECOLLECTIONS OF A RANCH HAND COMMANDER - 1968

6016  
In mid-1967 while assigned to the National Military Command Center (NMCC) in the Pentagon, I volunteered for duty in Vietnam. In the NMCC I had access to all the data from military actions in Vietnam such as aircraft loss rates, locations of units, types of missions, etc and by volunteering had the opportunity to request the type of aircraft to fly. Naturally, I selected F-4's as number one, F-100's as second choice (I had some time in this bird) and the A-37 as third choice.

First, however, there were two waivers to be obtained. One, release from the duty assignment, was no problem. Maj Gen Dave Liebman, my boss, readily approved. Second was from the Surgeon General because of gout, an incurable disease, I had since 1966. During the interview the SG misinterpreted the reason for the waiver and allowed as to how I shouldn't have to go to Vietnam because of my medical history. I hastily advised him that wasn't why I wanted the waiver and after some discussion he finally signed the waiver.

My first orders were for the 311th ACS at Danang AB flying C-123's. Later the orders were changed to the 12th ACS at Bien Hoa AB. I discussed the change and the defoliation mission with then ~~Asst~~ <sup>Lt</sup> Gen George Brown, Asst ~~the~~ the Chairman JCS, a former boss of mine with whom I talked occasionally since his office adjoined the NMCC. It was apparent that Gen Brown was not in full support of the defoliation mission -- but more of that later.

After flying training at Hurlburt AFB, a week of Escape and Evasion training at Fairchild AFB, Washington and a week of "Snake School" at Clark AB, Philippines enroute to Vietnam I arrived in Saigon (Tan Son Nhut AB) in mid-January 1968,

6016

Friends in 7th AF Hq took me in hand, provided some valuable briefings and an RON billet. The next day I flew to Bien Hoa AB and joined the Ranch.

The situation in the Ranch was somewhat disconcerting. No one met any incoming personnel, there were no briefings and one could conceivably spend several days - maybe even a week - finding a billet or any pertinent information. Whether anyone in the 12th ACS knew or not the Ranch was in the process of a buildup and personnel and aircraft were coming in, or about to come in, in increasing numbers. It was several days before I learned the squadron commander's name and almost a week before I met him (LC Don Stewart, now deceased).

In a short time it was apparent that the commander had deferred or delegated most of the responsibilities to the Operations Officer (LC Chuck Avery, Ret) who was placed in the position of practically running the squadron but passing decisions he didn't care to make on to the commander while at the same time making all the decisions he chose to make. It was not a good situation but in spite of it morale was OK. Another factor in the leadership area was the situation at Danang AB where the detachment chief often made decisions without consulting or advising the squadron commander at Bien Hoa.

It also became apparent at Bien Hoa that the wing and base commanders (3rd Tac Ftr Wing) and their staffs wished the Ranch was elsewhere. Billets for Ranch personnel, particularly officers, were scattered through the billeting area whereas fighter squadron and F4C officers were all in their own consolidated buildings. The Ranch hangers and ramp area were as far away from the base center as they could be. Transportation was limited. facilities were poor and

anything the Ranch wanted or needed it had to fight for - or steal !

In sharp contrast was the feeling, regard, esteem - call it what you will - that the fighter squadron commanders and pilots held for the Ranch. Of course, this was true throughout Vietnam and anytime the Purple Scarves came into an Officers Club they were treated with respect and admiration. I specifically recall one fighter squadron commander's pertinent summation of a Ranch mission he was escorting "You guys sure have brass balls." Lt Col Jim Cherry, Colo ANG, made the observation when Lt Bob Fisher, formation leader, chose to go back on a target where heavy ground fire had been encountered. I was in the right seat with Fisher.

That was the situation at Bien Hoa AB in early 1968 - good morale (but not without plenty of bitching), excellent support from and camaraderie with fighter pilots and FACs, good maintenance support from 3rd TFW, poor internal communications, loose squadron organization, not so good facilities and living accommodations.

Then came TET. There was no advance warning or inkling of an enemy offensive until it happened. Bien Hoa AB was hit at night and the situation was chaotic. Several Ranch hootches were burned down, including mine, and a number of airplanes damaged in the Corral (parking ramp). I spent the night in a bunker where someone had a radio with the tower and Security Police frequencies on it and we followed the "war" through the night. In spite of all the rockets, fire fights, etc there were no casualties among Ranch personnel (to the best of my knowledge) although a bunker sixty feet away took a direct hit killing fourteen.

When daylight came things were brought under control and the hunt for a bunk for the night began for those bombed and fired out. The BX was opened for those without clothes and credit purchasing extended. The fighter's, FAC's and choppers were airborne as needed but the Ranch birds stayed put.

A disconcerting item was the news that one of the Officers Club barbers was among the casualties. He was killed trying to come across the flight line and I recalled having had him cut my hair - and twist my neck ! - just three days before TET. A number of other casualties were also recognized as base employees.

Word came shortly to strip the Ranch birds of tanks and booms and prepare for emergency airlift operations. In less than 48 hours the Ranch was ready and from approximately four to six weeks flew "trash" missions in first class fashion later being awarded a Presidential Unit Citation for its efforts.

In March the "K" models (two jet pods attached) started coming in to the Ranch inventory. They were especially welcome for the safety factor provided since the other models were almost always 2-4000 pounds over gross weight on takeoffs. But they also posed a minor operational problem unless there were a sufficient number for a 3-4 ship mission. On the "run of terror" the K's generally had to maintain a 135 knot air-speed because of added weight and the jets in idle while other models "flew" along at 130 knots.

In early May speculation began as to who the next Ranch commander would be. Several wing staff (315th Wing, Phan Rang) and some senior L/C's in the airlift squadrons coveted the assignment. While on a visit to Phan Rang I arranged to meet the wing commander, Col Robert Brown (now USAF Ret), alone in



the club bar. We had two drinks and I told him I was qualified and wanted the job. He looked me in the eye for a few seconds and said "I dont know any reason why you shouldnt have it." And I became the third commander of the Ranch as a squadron since it achieved that status on October 15, 1966.

The Ranch was nearing peak of strength at this time - 25 aircraft and approximately 300 personnel with about 100 officers. Therein lay a potential problem with senior officers (14 L/Cs and 37 Majors) flying as GI pilots. There was a tremendous amount of talent and experience in the Ranch officer group as well as in the senior NCO's.

One of my first moves as commander was to reorganize the squadron and assign every senior officer an extra duty assignment and put some teeth into the extra duty performance. The Ranch T/O only authorized four full-time positions - sq commander, admin officer, intelligence and maintenance officers, the latter three being non-rated - so operations, maintenance, targetting, etc, etc were additional duty assignments albeit full-time responsibilities. Flight leaders, all L/Cs, a standardization board, flying safety, ground safety, personal equipment, supply, public information, awards and decorations (very important) etc, etc were assigned as additional duties.

Positive proof of the Ranch talent of 1968 is evidenced by the five general officers from that period. Only six officers with Ranch service have become GO's with M/G Russ Mohny heading the list. The other five were from the 1968 Ranch. Phil Larsen, now B/G Ret, John Stihl, now with TAC, and Bud Watts with MAC, and Jack Farris and Wayne Jefferson with SAC. Stihl <sup>(Maj)</sup> was Flying Safety Officer and did an outstanding job, Watts (Capt) and Farris (Maj) were II's and lead pilots.

Jefferson (Maj) arrived in mid-68 and was a quiet competent officer. Larsen (L/C) was detachment chief at Danang and created more problems for me as commander than anyone else. He was intent on making a record - missions and medals - and on three occasions led missions into 7th AF intelligence designated areas of high vulnerability. On two of these occasions I was personally questioned (7) by General Brown. It was on one of these occasions, in the General's office, that he expressed his feelings that he would prefer to use the Ranch as a tactical ground support unit on the Cambodian border. He believed that the deloliation mission, while temporarily of some benefit, would create long range problems. His foresight was remarkable.

Larsen was appointed as Danang detachment chief by the new wing commander Col John Pauly (now Gen, Ret) without any coordination or contact with anyone in the Ranch. The recommendation was made by the 315th Wing DO and Larsen would not have been my choice because I knew his attitude and intentions. At a later date Col Pauly apologized to me when he was made aware of the complete background. Nuf sed, so be it.

A second step in improving the Ranch was to prepare a comprehensive briefing with an up-to-date expansive intelligence portion. All incoming officers and senior NCO's were given this briefing in the commander's office within 24 hours of arrival. All questions were answered and information exchanged since incoming personnel sometimes knew more about the overall war than we did ! An important part of this meeting was the discussion of ER's with the officers. I had been in the Pentagon and watched many officers avoid duty in Vietnam. My personal

feelings were that every officer who came to the Ranch voluntarily - contrary to some beliefs not all assignments to the Ranch were voluntary - would leave with an outstanding ER. Provided, of course, he did the job. New arrivals were also advised that if they did not want to stay with the Ranch they could be reassigned immediately. And there was no problem here because the 315th Wing was constantly "raiding" the Ranch to supplement its four airlift squadrons. All that was needed was a phone call to ship out anyone who didn't want to be in the Ranch. Over the rest of the year there were few takers.

Another important project was the revitalization of the Awards and Decorations program. Several officers handled this assignment before one was found who did a superlative job. (Maj, now Col, Don Rayment). A new A&D review board was established at Wing Hq (Phan Rang) with all squadron commanders comprising the board. The Wing Vice Commander (Col Noble Grenblatt) served as president. At these monthly meetings the Ranch cockpit procedures were emphasized again and again - we flew as aircraft commander and pilot in contrast to the airlift missions pilot and co-pilot. The wing command and staff were constantly invited to fly missions with the Ranch. It took some time but the Ranch eventually got more than its share of Silver Stars and DFC's by virtue of its unique and untraditional mission. (After Col Lauly qualified he proudly wore his Purple Scarf on appropriate occasions).

Media recognition for the Ranch was encouraged. Although the official Air Force position was to not focus media attention on the defoliation mission, like an elephant it

was difficult to hide. Contacts and friends at MACV, 7th AF, and the 3rd TFW all assisted in sending media representatives to fly missions with the Ranch. Consequently all forms of media coverage - print, radio and TV - increased substantially throughout 1968.

The number of meetings the Ranch commander attended increased considerably. First, within the squadron, a weekly meeting of all staff officers was initiated. Progress of new officers - pilots and navigators - and enlisted flight crewmen was evaluated not by one but by several - flight commanders, stan eval, operations and maintenance officers and commander particularly as to performance in additional duty assignments. A Commanders Ball program was initiated and conducted for all squadron personnel monthly in the base theater. A feature of this program was the presentation of awards and decorations.

There was a weekly staff meeting with the base commander and his staff where a constant battle was waged to obtain better accommodations and facilities for the Ranch.

Then there was a monthly staff meeting at 315th Wing Hq at Phan Rang which also coincided with an A&D meeting mentioned previously. Another <sup>(monthly)</sup> meeting took place at MACV Hq with the Chemical Ops Division relative to targetting objectives and priorities. <sup>(See Atch 1)</sup> A monthly meeting was also held with the 7th AF TACC where a liaison office - two officers, one with Ranch experience - had been established to coordinate defoliation mission operations. <sup>(See Atch 2)</sup> There were also meetings with Province Chiefs, PAC's and Army Division Chemical officers, usually handled by <sup>L/C</sup> ~~Bill~~ Wildman <sup>(now Col, RAR)</sup> or his Ops people, to discuss mission requests.

In between these formalized meetings came requirements

to check operations at Danang and Nha Trang plus all the normal meeting requirements of command such as a daily review with Lt Dave Yost, a fine young administrative officer, and 1st Sgt ~~Roland~~ <sup>Roland</sup> Mitchell, one of the best NCO's I encountered in my 33 years in the Air Force.

In early July an operational problem came about with the emphasis by MACV on mid-country target areas. The locations were too far south for the Danang contingent to cover and too far north for Bien Hoa without an intermediate refueling site. Nha Trang was an excellent location and on a visit there two old friends, Col Fred Webster, DO and Col Bert Levesque, DM (both now deceased) agreed to help the Ranch. So, with very minimal higher headquarters action or approval, a refueling way station was quickly established at Nha Trang. The tank trucks were provided from Nha Trang sources and arrangements made to ship herbicide barrels from Bien Hoa. An operations building with telecon facilities was provided adjacent to the refueling area. RON facilities were extremely limited and one of the provisions of operations was that RON's occur only on an emergency basis. Nevertheless, the use of the Nha Trang refueling station allowed for two missions daily against the target areas and continued use of the facility ran through November of 1968.

Digressing for the moment from operations, about two days after assuming command of the Ranch one of the more enterprising officers (Maj George Poone, now Col, Ret) advised that he knew where some air conditioners were available. A nearby Army installation had been vacated and the BOQ's - all single rooms with window air conditioners - were sitting there empty. I obtained a covered van from the Motor Pool, picked up four

officers armed with appropriate tools, and drove to the Army installation gate where the sentry passed the van through on my statement of being on an "inspection" tour. The crew was able to "liberate" eight air conditioners and the Orderly Room became tolerable for the first time with two of the units installed. The other six were distributed among the hooches.

A short time later another enterprising officer (Capt Don Ayres) discovered a cache of throw rugs in a Phan Rang warehouse. I sent an airplane to pick up the 150 3'x6' rugs and they were distributed to all the hooches. Six of them sewn together provided wall-to-wall carpetting for the commander's office and many hooches were likewise refurbished.

There were follow-ups to these forays. A visit by the OSI on the air conditioners was forestalled with some logical reasoning and a question from the Phan Rang commander about the rugs was ignored.

Another "midnite requisition" was not as successful. One morning the maintenance area on the flight line boasted a freshly painted 12' x 40' trailer all set up as a much needed classroom. Some of the maintenance boys had spotted it sitting unused in an isolated area of the base and after a couple of weeks of observation made their move. Unfortunately the trailer was on the property records of an Army unit and the 1st Lt who had signed for it was about to be transferred. He initiated the OSI investigation that led to my office. It was agreed that return of the unit, in better condition, would resolve the matter without any charges. The line troops were naturally chagrined but not undeterred.

A morale action taken early in July was to setup a mini-snack bar in the Ranch flight line area. The base EX mobile

unit never seemed to make it down to the Ranch flightline so action was taken to remedy the situation. A committee of officers (1 Maj, 2 Cpts) was designated to handle the project. Contacts were established with the fighter squadrons (all had snack bars adjacent to their operations plus a walk-in reefer) for supplies - soda pop, candy bars, donuts, coffee, etc - a small building was constructed and two Vietnamese AF wives (good looking naturally) were hired to provide service. The results were amazing ! Profits went into the squadron fund and were used to purchase plaques for aircrew personnel ending their tours, purple scarves for VIP's and media flying missions, certificates for hits from ground fire (Punctured Providers), squadron parties, etc. While on R&R in Hong Kong I purchased a duplicating machine for the Orderly Room which allowed for a Ranch bulletin to be published and delivered to all the squadron hootches often on a daily basis. Of course, the paper had to be scrounged since it was against base regs to publish bulletins without prior approval. But it was a good and welcomed morale booster and communications tool.

One of the more unique maintenance problems occurred when L/C Dave Willoughby (now Col, Ret), an outstanding officer and incomparable maintenance chief, additional duty (Capt ~~John~~ <sup>Bull</sup> Schmitz was the non-rated maintenance officer), recommended that we remove the oxygen equipment in the Ranch planes. Tanks and lines accounted for perhaps 3-400 pounds - not really much but considering our always over gross takeoff weight any reduction was welcome and there was definitely no need for oxygen in Vietnam, particularly on Ranch missions. The highest peak in the country was only 8000' so there was ample margin

for altitude safety on any type of mission with a 123.

On an inspection the 315th Wing DM wrote up the absence of the oxygen equipment which set off a lengthy exchange of correspondence - indorsement after indorsement - with the Ranch holding its ground on a safety basis against what we considered a stupid adherence to unnecessary maintenance of superfluous equipment. The issue evidently was forwarded to PACAF Hq and Lt Gen James Edmondson, PACAF Vice Commander, paid a visit to Bien Hoa AB. His visit was naturally an overall one and at the time we had no knowledge of his familiarity with our oxygen equipment situation. The 3rd TFW commander, Col Homer Hansen (now MG, Ret) was host for Gen Edmondson's visit but the General accepted an invitation to fly a Ranch mission. The mission was a milk-run type in Rocket Alley about 25-30 miles northwest of Bien Hoa. Unexpected ground fire forced lead to abort and #2 and 3 picked up hits. The General was on the Idiot's seat in #6 between myself and LC Jack Langhorne in the right seat. Lead landed without hydraulic pressure and a flat tire but no injuries. After debriefing the General was presented a Purple Scarf and made an Honorary Cowboy. On his departure he quietly called me over and with no one within hearing said "Mac, dont concern yourself anymore about that oxygen equipment problem." That was a real surprise ! Dave Willoughby and I hoisted a few to Gen Edmondson that night.

On the Operations side a major reason for the Ranch's prolific and successful mission accomplishment record was due to LC Bill Wildman (now Col Ret) the quiet and efficient Operations Officer, additional duty, of course. During 1968 the Ranch flew more missions (including sorties) than any



other year and put on target the second highest total of gallons of herbicide. More herbicide was dispensed in 1967 but the Ranch flew airlift for six weeks after TET and again on a limited basis in October.

An airlift mission was one day's flight time regardless of the number of landings (sorties) which could range from three to ten or more. A Ranch mission was one takeoff and one landing. Thus the Ranch sorties flown during airlift operations undoubtedly ranged between 300-500.

One of the more interesting and demanding missions was given to the Ranch in October. The mission had been requested by the US Ambassador to Laos (William Sullivan) and cleared at the highest levels. The mission had to stage at Pleiku AB because of the distance involved. Six (6) birds were slated to defoliate a main highway in the eastern area of Laos. 7th AF intelligence indicated no potential problems from ground fire. The local FAC stated there was a North Vietnamese regular regiment camped along the road. The fighter escort (A-7's) based at Pleiku were limited to 3000' ! The pre-mission <sup>(briefing)</sup> was chaotic until I reached B/G McLaughlin, 7th TACC director (see Atch 2) who cleared the the fighters to provide on-the-deck coverage as he didnt believe the FAC's assessment

Bill Wildman led the flight and I flew #4 leading the second element of three as we had determined the most efficient coverage would be for lead to fly the left side of the road with #2 and #3 in echelon to his left. #4 would fly to the right of the road just on the edge of lead's spray pattern with #5 and #6 echeloned to the right. The formation worked well and the mission was highly successful as determined later. However, the FAC was right. Ground fire was heavy and ~~severe~~

accurate. One of the fighters~~w~~ was lost and the rest were inadequate. #5, piloted by Maj Frank Moore (now LC Ret) lost an engine to ground fire, pulled up and headed back to Pleiku. All aircraft picked up numerous hits. The right engine on #4 quit while taxiing in and there was a two foot hole in the right wing. The left tire went flat as did tires on two other planes. Only one of the six birds was capable of returning to Bien Hoa and a maintenance crew was quickly flown in from Bien Hoa and Dave Willoughby remained behind to ramrod the patching up of the Punctured Providers.

The success of this mission led to a later series of missions flown in four days in November from Udorn AB in Thailand over locations in Laos, again requested by the US Ambassador. The Ranch crews from the contingent at Denang flew this series of missions and received a letter of high commendation from MG Louis Seith, then Dep Cdr 13th AF. (See Atch 3)

Another highly interesting mission took place in late October. This is so well documented and described by LC Bill Becker, 90th Sq Cdr(now B/G) that it is included as Atch 4.

~~Exxlyx~~ Early on a program of "Ranch Ins" was established. An attempt was made to have a major party in the Bien Hoa Officers Club every other month. They bore little resemblance to a Dining In but were successful in bringing all the officers together for a festive occasion. A couple of victims of the Ranch tradition of the guest speaker "not speaking" were Col John Moran, Chief of the MACV Chemical Ops Div, and LC Jim Patrick, 23rd FAC Sq Cdr, and my roommate. Jim brought with him a beautifully mounted captured AK-47 rifle for presenta-

tion to the Ranch. After his "treatment" as the speaker he threatened to put that rifle up my butt and pull the trigger!

Gen Brown was the featured guest at the October 15th Ranch In, the second birthday of the Ranch as a full fledged squadron, and it was questionable as to how he would be handled by the irreverent Cowboys - Ranch tradition or respect for the Commander. Fortunately, the latter prevailed and the General, having been tipped off in advance as to the possibility of Ranch speaker treatment, was a little surprised. He was amazed at the Ranch morale and spirit and commented specifically on it.

The Ranch received a highly congratulatory message from Vietnamese Vice President Nguyen Cao Ky on the birthday occasion. Ky had been invited to attend and was planning to do so until word was received that Gen Brown would be present. That posed a ticklish situation as I was unaware of the relationship between the two men and didnt want to generate any political problems for Gen Brown. So, as tactfully as possible, the invitation to Ky was withdrawn. His attendance was predicted on the fact that as Air Marshal of the VNAF he had flown a Ranch mission, presented the commander with his own Purple Scarf and proclaimed the Ranch as an honorary unit of the VNAF. This provided the basis of the award of VNAF wings for 200 combat hours of defoliation missions. This award was formalized with 7th AF Personnel in late 1968 and should be reflected on the records of all those who qualified. (Atch 5)

In November Gen John P. McConnell (no relation), AF Chief of Staff, visited Bien Hoa AF. The emphasis on his visit, hosted by Col Hansen, was on the 3rd TFW and the Ranch was not included in the Chief's itinerary. However, I placed

myself in one of the fighter squadron's briefing rooms and Gen McConnell recognized me with a "Mac, what are you doing here ?") When I told him I was the Ranch commander he immediately exclaimed that he wanted a picture of one of our birds popping a chute on landing ! He thought that was just great. I thought old Hansen would blow a gasket but the Ranch was included on all future VIP visits - at least while I was there.

The next day a cleaned-up bird made a number of high speed taxi runs while the base photogs took their pix of the parachute pops. Eventually, a 20" x 24" blowup in color found its way to Gen McConnell's office. I wonder where it is now ?

In mid-September I had the pleasure of meeting LC Rex Stoner (now LC Ret) on his arrival and informing him that he would not assume command of the Ranch until my end-of-tour departure in late December. Stoner had been in the Pentagon and corresponded with a friend of his in the Ranch. Since he outranked me by more than two years he made an erroneous assumption and had indicated in his letters several steps he would take to "straighten out" the squadron when he arrived at Bien Hoa and took over command. In the meantime, Col Pauly had assured me that I would remain as commander until the end of my tour and to head off any potential problem had Stoner go to Phan Rang for approximately two months TDY to check out in airlift procedures. Stoner rejoined the Ranch in November and went through the defoliation check-out requirements before assuming command on December 20. Gen Brown conducted the formal change of command ceremony on the Ranch flight line and presented me with a Bronze Star. As he pinned it on he said "This could be a Legion of Merit, Mac,

but you can only earn a Bronze Star in combat and you'll probably get a Legion of Merit later in your career." He was wrong on that score. However, this occasion represented the only time a senior commander conducted a change of command ceremony for the Ranch. On Dec 21st I left for an R&R to Australia.

From the takeover of command of the Ranch I had incessantly asked for better accommodations. In November word was received that a new building would be provided in the center of the base. I had the opportunity of planning the interior layout and the building was finished in late December. It contained space for a large briefing room, intelligence and targetting rooms, a personal equipment storage and issue center, an operations office, the orderly room and a commander's office. It allowed for all elements of the Ranch to operate in the same location except, of course, for Maintenance which ~~would also inherit~~<sup>then</sup> additional space in the flightline building. Unfortunately, I never got to use the new building. C'est la guerre !

In summary, from my viewpoint as commander, 1968 was a climactic year for the Ranch. First came TET and a significant change in the "war" with the squadron twice proving its capability in the airlift mission; secondly, the unit reached peak strength in personnel and aircraft (it was downhill from early '69 until the end of operations in '71); thirdly, more missions were flown including defoliation and airlift; fourth, more decorations and awards were earned (altho it must be conceded that with more planes, more missions and more people that was probably inevitable); fifth, more "out of country" missions were flown, primarily into Laos; sixth, more recognition and publicity was received altho some may consider

that a dubious distinction; and, perhaps most important, there was no loss of life after May. Only one major accident occurred (a wheels-up landing on an airlift mission in Oct), there were no court-martials, no Article 15's and minimal disciplinary action required. There were incidents galore but nothing requiring more than a verbal reprimand or a transfer. There were no AWOL's and only one instance of drug use (pot) altho there was no doubt of its presence for a time. A series of unannounced hootch inspections by senior officers without doubt cut down on drug possession and use. Several officers were transferred out of the Ranch involuntarily as well as some flight engineers. Grounding was also utilized but sparingly.

The bottom line undoubtedly is that when I left the Ranch it was with a feeling of accomplishment, of having improved the performance and record of an outstanding organization which is more difficult to do than to take over a unit with nowhere to go but up. (See Atch 5) The challenge was substantial -- operating from three locations, Bien Hoa, Nha Trang and Danang; answering to a command ~~location~~ at a fourth location (Phan Rang) whose airlift mission was not compatible in any way with the defoliation mission but whose operations and maintenance staffs continually tried to exercise unwarranted actions on the Ranch; having major maintenance and personnel actions accomplished by an organization not in the chain of command (3rd TFW); receiving operational guidance direct from the highest level of command (MACV Chem Ops, see Atch 1) often bypassing three intermediate ~~headquarters~~ headquarters, 7th AF, 834th AD and the 315th SOW and throughout the entire period participating in an IRAN and retrofit program with the aircraft.

In closing I can truthfully say - I would do it all again and probably wouldn't change a thing ! TO THE RANCH !!!

6016

See (6)  
Atch

HEADQUARTERS  
UNITED STATES MILITARY ASSISTANCE COMMAND, VIETNAM  
APO SAN FRANCISCO 96222  
Chemical Operations Division



MACCOC7

13 August 1968

SUBJECT: Letter of Commendation for Outstanding Achievement

THRU: Colonel John Pauly  
Commander 315th Special Operations Wing  
Phan Rang Air Base, APO 96321

TO: Lieutenant Colonel Arthur McConnell  
Commander 12th Special Operations Squadron  
Bien Hoa Air Base, APO 97227

Lieutenant Colonel Arthur McConnell has distinguished himself by his exceptional performance since assuming command of the 12th Special Operations Squadron. He has made many significant contributions to the US/GVN herbicide program conducted in South Vietnam. Because of the sensitivity of this program and the top level interest on the part of Government of Vietnam and United States, the role of Commander of the 12th Special Operations Squadron carries with it responsibilities that exceed those normally expected of a squadron commander. In all cases, LTC McConnell has displayed unusual initiative, foresight and diplomacy in the performance of his duties. Such actions resulted in a close and effective working relationship with elements of the RVNAF and MACV Headquarters and were of inestimable value to the herbicide effort.

The performance of the 12th Special Operations Squadron has reflected LTC McConnell's outstanding leadership and managerial qualities. During his tenure, target acquisition, planning and scheduling have become significantly more complex. This situation developed as a result of an increase of priority targets in the vicinity of high density enemy and friendly combat operations. The continued effort to redistribute his aircraft and personnel to counter the main enemy threat is indicative of his foresight and adaptability to changing conditions. His reactions to the needs of combat commanders were conducted with dispatch and his courage and selflessness during operational missions were exemplary.

As a result of his personal influence, the preparation, coordination, surveying, fragging, execution, recording and reporting of targets have been

*Plak 1*

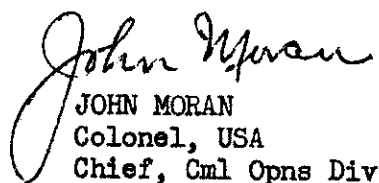
6010

MACCOC7

13 August 1968

SUBJECT: Letter of Commendation for Outstanding Achievement

accomplished with an exceptional degree of responsiveness. The outstanding quality of LTC McConnell's work and his sound judgement and energetic application of professional knowledge have contributed significantly to the Free World efforts in the Republic of Vietnam. LTC McConnell is to be commended for his contributions to the defoliation and crop destruction efforts in SVN. His performance reflects great credit on himself, his command, and the Air Force as a whole.

  
JOHN MORAN  
Colonel, USA  
Chief, Cml Opns Div



DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 315TH SPECIAL OPERATIONS WING (PACAF)  
APO SAN FRANCISCO 96321



REPLY TO  
ATTN OF:

C

25 December 1968

SUBJECT: Performance of Duty, 12th Special Operations Squadron

TO: 12th Special Operations Squadron (C)  
Lt Colonel McConnell

1. It gives me a great deal of pleasure to forward the attached letter from Brigadier General McLaughlin which is highly complimentary of the manner in which the "Ranch" has performed and of the effectiveness of your personal leadership.

2. Please pass on to all of the "Ranch Hands" my congratulations and appreciation for their continued fine performance.

*John W. Pauly*  
JOHN W. PAULY, Colonel, USAF  
Commander

1 Atch  
7AF (TACD) Ltr, 22 Dec 68

*Atch 2*

6012

DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS SEVENTH AIR FORCE (PACAF)  
APO SAN FRANCISCO 96307



REPLY TO  
ATTN OF: TACD

22 Dec 1968

SUBJECT: Performance of Duty, 12 SOW

TO: 315 SOW (C)

1. I am writing this letter to express my appreciation for the work that the 12th Special Operations Squadron is performing in the defoliation mission. Due to the nature of this mission, it ties into the TACC operations and consequently, I closely follow their operation to make sure Forward Air Controllers and fighter support are coordinated.

2. In my opinion Lt Colonel McConnell has done an outstanding job as Commander of the 12 SOW. This is especially worthy of mention in view of the diversified backgrounds of the aircrews and their unique mission.

A handwritten signature in cursive script, reading "George W. McLaughlin", is positioned above the typed name.

GEORGE W. McLAUGHLIN, Brig Gen, USAF  
Director, Tactical Air Control Center

6016

1st Ind to HQ 7th/13th AF (DC) Ltr, 22 Nov 68, Favorable Communication

DAF, 12 Special Operations Squadron (C)

1 December 1968

TO: 12 Special Operations Squadron (OLAA)

1. It is with great pleasure and pride that I forward this indication of professional competence and dedication to mission accomplishment exhibited by the 12th Special Operations Squadron personnel who conducted special missions from Udorn AB.

2. I am aware of the hazards encountered and the difficulties inherent in operating in a strange environment away from the normal area of operations. The success of the mission is a tribute to the professional skill of the aircrews and maintenance personnel and provides further attestation that the Ranch can always be called upon and relied upon to do a first class job.

3. Please accept my personal congratulations for an outstanding performance of duty as well as my appreciation for the off-duty conduct of all concerned. When a senior commander invites a unit back it is an indication of respect not only for the mission accomplishment but also for the manner in which a unit evidences esprit de corps and proper behavior. Again, my thanks to all for a job WELL DONE!

ARTHUR F. McCONNELL JR, Lt Colonel, USAF  
Commander

2 Atchs

1. Ltr 7th/13th AF (DC)  
dtd 22 Nov 68
2. Personnel Roster

*Ctrl 3*

6016

DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS DEPUTY COMMANDER  
SEVENTH AIR FORCE/THIRTEENTH AIR FORCE, THAILAND (PACAF)  
APO SAN FRANCISCO 96237



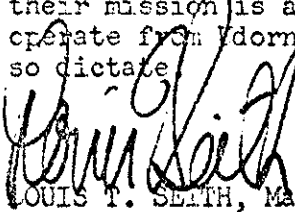
REPLY TO  
ATTN OF: DC

22 NOV 1968

SUBJECT: Favorable Communication

TO: 12 Sp Op Sq (C)

1. During the period 11 November 1968 through 15 November 1968, a classified RANCH HAND operation was conducted by personnel of your command, operating from Udorn RTAFB. This operation was under the command of Lt Colonel Phillip N. Larsen, FR20515, and involved those personnel from OLAA listed in attachment 1.
2. The requirement for this operation was generated at the U.S. Embassy level. Execution involved FAC operation and fighter support from two locations other than Udorn. The four daily missions required the ultimate in preparation, coordination and professionalism for proper execution. All requirements were fulfilled as planned.
3. Your personnel involved in this operation displayed superior competency in the accomplishment of their specialized tasks. Their complete dedication to both the United States Air Force and their mission is apparent. It will be a pleasure to have them operate from Udorn RTAFB again in the future, should requirements so dictate.

  
LOUIS T. SMITH, Major General, USAF  
Deputy Commander

1 Atch  
Personnel Rooster

PERSONNEL

OLAA, 12 Sp Op Sq, APO 96337

TDY Udorn Air Field 11 November 1968 thru 15 November 1968

LT COL LARSEN, Phillip N. FR20515	COMMANDER
MAJOR DUFF, Thomas O. FR46807	OPERATIONS OFFICER
MAJOR CRAWFORD, Charles E. FR49622	MAINTENANCE OFFICER
MAJOR POKLUDA, William R. FR45440	
CAPT WATTS, Claudius E. III FR51467	
CAPT HUGHES, Carol D. FR67060	
CAPT DUGGAN, Donald H. FV3056239	
CAPT SAUNDERS, Albert E. FR68579	
CAPT RODGERS, William M. FR77468	
1/LT WEST, Lloyd A. FV3181981	
MSGT MAYO, Ferman R. AF25724184	LINE CHIEF
TSgt WATSON, Ray E. AF18485647	
SSgt ROBINSON, Leroy AF12415536	
SSgt HILL, Gerald G. AF19596099	
SSgt WESTFALL, Jack W. AF13531511	
SSgt LEMAIRE, Raymond AF12423180	
SSgt MORRIS, William AF14485144	
SSgt SCHULTZ, Steven G. AF13744484	
SSgt MATHEWS, Robert L. AF15893890	
SSgt ARMAND, Sherrill C. AF15894414	
SSgt NEIGHBORS, Nathaniel, AF184337455	
SGT HAMMERSTROM, Lloyd A. AF16863489	
SGT ASHER, John C. AF19796644	
SGT LOPEZ, Richard E. AF17724442	
ALC HAYNES, Robert H. AF12866861	
ALC BRIDGES, Johnny L. AF15955146	
ALC CASTILLO, Arthur B. S. AF15955553	

Atch

0010

far  
ADON  
out

FROM: 90th TFS

11 November 1968

SUBJECT: Outstanding Airmanship

TO: DCO  
C  
12th SOS  
IN TURN

1. On 31 October 1968, the RANCH HANDS of the 12th Special Operations Squadron flew an exceptionally hazardous mission in An Xuyen Province, approximately 30 miles south of Ca Mau, Republic of Vietnam. Detailed advance planning and outstanding mission execution by the RANCH HANDS were responsible for the highly successful results attained on this mission.
2. The planned spray target was at the southern extreme of the IV Corps Tactical Zone, an area of consistently intense enemy activity. On 24 May 1968, the Ranch Hands were fragged into the area with fighter escorts of both F-100s and A-37s to provide heavy fire suppression. On that date the enemy anti-aircraft fire was so intense, that one of the UC-123s was shot down and all three crew members were lost. Only seconds after the UC-123 went down, the extremely intense automatic weapons fire claimed one of the A-37s, killing that pilot also. The same target was not scheduled again until 2 July 1968, when another flight of six UC-123s from the 12th SOS entered the area, again accompanied by a fighter escort for heavy fire suppression. On this occasion, the Ranch Hands again came under extremely intense groundfire and received the second highest total of hits ever recorded on a single mission. All six aircraft in the formation received battle damage, with a total of 29 hits. Intelligence reports indicated this portion of An Xuyen Province still remained wholly in enemy hands, and that intense anti-aircraft fire could be expected for the mission of 31 October 1968.
3. To maximize the chances for survival of the Ranch Hand crews, the heaviest fire suppression organized to date was planned in support of the 31 October mission. Ten F-100 Super Sabres from the 90th Tactical Fighter Squadron were to escort the UC-123s into the area and pre-strike the entire length of the planned spray target. The day prior to the mission, the fighter commander, Lt Col William J. Becker, briefed all details of the mission with the Ranch Hand commander, Lt Col Arthur F. McConnell, Jr. Precise timing and complete understanding between the fighters and the spray aircraft were absolutely essential for the success of this mission.
4. From the moment the mission was underway, Col McConnell demonstrated outstanding control of the UC-123 formation. All prebriefed signals with the fighters were executed perfectly. Two Forward Air Controllers were assigned to guide and direct this massive air operation, and Col McConnell rapidly briefed both FACs on all facets of the mission. To allow the fighters to be in perfect position for timely delivery of the massive pre-spray attack, Col McConnell quickly agreed to make an extra orbit with his formation prior to departing

Atch 4

6016

the initial point (IP). When all ten fighters and both FACs were in their assigned pre-strike holding positions, Col McConnell called departing the IP. The entire operation was keyed on his precision timing from the point on. As each successive position of the incoming flight of UC-123s was radioed to the fighters and the FACs, pre-assigned targets were marked by the FACs and attacked by the fighters. Heavy ordnance was delivered at minimum safe distance immediately in front of the UC-123s in this all-out effort to suppress the anticipated heavy enemy groundfire. Col McConnell maintained exacting control of his flight and continued throughout the entire planned spray run in the closest possible proximity to the fighter's ordnance deliveries.

5. The exhaustive advance planning and the outstanding mission execution shown by the Ranch Hands of the 12th SOS on 31 October resulted in no ground fire being reported and none of the aircraft sustaining battle damage. Again, the superior professionalism which is the hallmark of the 12th SOS resulted in a highly successful mission under extremely demanding and hazardous conditions. I heartily extend my personal congratulations, along with those of all members of my command, to the 12th SOS for this outstanding achievement.



WILLIAM J. BECKER, Lt Colonel, USAF  
Commander


1st Ind to 90TFS Ltr, Subj: Outstanding Airmanship, 11 Nov 63

DCO

12 November 1963

TO: C

Another example of the outstanding accomplishments of the 12SOS. The success of the Ranch Hand missions has a direct bearing on our own. Target acquisition is made easier by defoliation and permits more accurate assessment of the damage our fighters inflict on the enemy. Further, it deprives the enemy of long standing sanctuaries previously hidden by jungle foliage. I wish the Ranch Hands continued success that our combined efforts may shorten this conflict.

  
WILLIAM J. HOLTON, Colonel, USAF  
Deputy Commander Operations


2nd Ind

C

13 NOV 1968

TO: 12SOS

Congratulations to all Ranch Hands participating in this mission. Keep up the good work.

  
HOMER K. HANSEN, Colonel, USAF  
Commander



DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS SEVENTH AIR FORCE (PACAF)  
APO SAN FRANCISCO 96307



REPLY TO  
ATTN OF: DPISA

SUBJECT: Foreign Decorations

7 SEP 1968


TO: 834 Air Div

1. Attached are award elements pertaining to the award of the VNAF Pilot Wings for Lt Colonel Arthur F. McConnell, Jr., FR35174.

2. Commander Seventh Air Force has determined that requirements for award of this decoration have been satisfied. The only elements received through official channels for this decoration are attached and no other elements are forthcoming. Should the recipient desire a medal for the above cited award it can be procured through any of the concerns listed on the reverse side.

3. The above individual is authorized to accept this award and have it posted to his personnel records, in accordance with para 5-3, AFM 900-3, 22 March 1968.

FOR THE COMMANDER

  
JOHN E. DUNNING, Captain, USAF  
Chief, Awards Branch  
Personal Affairs Division

2 Atch  
1. List of Concerns  
2. Official Order

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V. OVER-ALL EVALUATION (Compare this officer ONLY with officers of the same grade)									
Specific justification required for these sections								Specific justification required for these sections	
<input type="checkbox"/> UNSATISFACTORY	<input type="checkbox"/> MARGINAL	<input type="checkbox"/> BELOW AVERAGE	<input type="checkbox"/> SLIGHTLY BELOW AVERAGE	<input type="checkbox"/> EFFECTIVE AND COMPETENT	<input type="checkbox"/> EFFECTIVENESS WELL ABOVE MOST	<input type="checkbox"/> EXCELLENT, SELDOM EQUALED	<input type="checkbox"/> OUTSTANDING, ALMOST NEVER EQUALED	<input checked="" type="checkbox"/> ABSOLUTELY SUPERIOR	
VI. PROMOTION POTENTIAL									
1. DOES NOT DEMONSTRATE A CAPABILITY FOR PROMOTION AT THIS TIME <input type="checkbox"/>				2. PERFORMING WELL IN PRESENT GRADE. SHOULD BE CONSIDERED FOR PROMOTION ALONG WITH CONTEMPORARIES <input type="checkbox"/>					
3. DEMONSTRATES CAPABILITY FOR INCREASED RESPONSIBILITY. CONSIDER FOR ADVANCEMENT AHEAD OF CONTEMPORARIES <input type="checkbox"/>				4. OUTSTANDING GROWTH POTENTIAL BASED ON DEMONSTRATED PERFORMANCE. PROMOTE WELL AHEAD OF CONTEMPORARIES <input checked="" type="checkbox"/>					
<b>VII. COMMENTS/FACTS AND SPECIFIC ACHIEVEMENTS:</b> Lt Col McConnell has performed duties of a Squadron Commander in a truly superior manner. The unique defoliation mission of his unit, coupled with the split operation of his squadron between two distant bases where they have been located as tenants, magnified the challenge of his position. In spite of the obstacles, Lt Col McConnell's squadron performed extremely effectively exceeding by a considerable margin prior performance statistics. During the reporting period, his squadron was increased in size by 30 percent and was required frequently to adjust its bed-down between its two locations to accommodate changes in weather and mission requirements. Additionally, it showed great flexibility by assuming the airlift mission on several occasions when abnormal airlift requirements dictated this decision. Under Lt Col McConnell's strong leadership, the squadron met each of these challenges in a highly professional manner. This is the best measure of his overall effectiveness. The unit's outstanding performance of the "Ranch Hand" mission has become legend in RVN and is also the subject of numerous favorable communications received from both ground and air commanders. This fine performance can be attributed in large measure to the aggressive dedication of Lt Col McConnell and to the morale and professional attitude he has instilled in his personnel. <b>STRENGTHS:</b> Strong dedication, sound planning ability, effective resource manager and aggressive leadership in the air and on the ground stand out as positive strengths. <b>SUGGESTED ASSIGNMENTS:</b> This officer is extremely versatile and could serve effectively as a tactical unit commander or as a staff officer in the P10 field per his previous background. <b>OTHER COMMENTS:</b> The full period of this report covers duty in SEA where Lt Col McConnell flew 465 combat hours during 389 combat missions. I recommend that Lt Colonel McConnell be promoted well ahead of his contemporaries.									
VIII. REPORTING OFFICIAL									
NAME, GRADE, AFSN, AND ORGANIZATION <b>JOHN W. PAULY, Colonel, FR16897, 315 Sp Ops Wg Phan Rang AB, RVN (PACAF)</b>				DUTY TITLE <b>Wing Commander</b>		SIGNATURE <i>John W. Pauly</i>			
				AERO RATING <b>Command Pilot</b>		CODE <b>1</b>		DATE <b>27 Jan 69</b>	
<b>IX. REVIEW BY INDORSING OFFICIAL</b> I concur. During his tenure as Commander of the 12th Special Operations Squadron Lt Colonel McConnell made substantial contributions to defoliation operations in RVN. He played a major role in the planning and execution of these unique missions as well as in commanding the forces committed to them. The impressive record compiled by his unit during the last seven months is testimony to Lt Colonel McConnell's superior ability as a planner, manager and leader. I recommend him for promotion to Colonel.									
NAME, GRADE, AFSN, AND ORGANIZATION <b>BURL W. McLAUGHLIN Maj Gen, FR10624, 834th AD, Tan Son Nhut AB, RVN</b>				DUTY TITLE <b>Commander</b>		SIGNATURE <i>Burl W. Laughlin</i>			
				AERO RATING <b>Command Pilot</b>		CODE <b>1</b>		DATE <b>31 January 1969</b>	

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Oct 68

12th SOS Officer Statistics (Pilots/Navigators)

Pilots

11 Lt. Cols. - 15%	15 Command Pilots - 21%
28 Majors - 38%	33 Senior Pilots - 47%
35 Captains - 35%	24 Rated Pilots - 32%
8 1st Lts. - 12%	(8 UPT) (11%)

Education

1 PhD - 1%  
16 Masters - 22%  
44 BA/BS - 60%  
13 no degree - 17% (all have some college credit)

58% of pilots have attended SOS  
22% of pilots hav attended Command and Staff

Age

Average age  $34\frac{1}{2}$  years  
Oldest - 52 - 50  
Youngest - 5 who are 24

Flying Time

Average 3749 hours  
Three Highest - 8975, 8245, 7777  
Three Lowest - 480, 509, 510  
  
Combat Hours (0-1)      Average 253 hours  
Three Highest - 1318, 795, 723  
Three Lowest - 4, 13, 16

IP Time (Previous and Ranch)  
68% of the pilots have been or are IP's  
Average 988 hours  
Three highest - 4266, 3492, 2507  
Three Lowest - 2, 2, 8

Commissioned Service

Average:  $12\frac{1}{2}$  years  
9 people over 20 yrs.  
8 people under 4 yrs.

73% of pilots are Regular Officers  
27% of pilots are Reserve Officers

### Navigators

1 Lt Col. - 6%	2 Master Navigators - 12½%
9 Majors - 56%	12 Senior Navigators - 75%
5 Captains - 32%	2 Rated Navigators - 12½%
1 1st Lt. - 6%	(1 UNT) (6½%)

### Education

0 PhD  
7 Masters - 47%  
3 BA/BS - 20%  
5 No degree - 33% (all have some college credit)

73% of navigators have SOS credit  
13% of navigators have Command and Staff credit

### Age

Average age 36 years.  
Oldest - 3 who are 40  
Youngest - 1 who is 26

### Flying Time

Average 3466 hours  
Highest - 5698  
Lowest - 605

Combat Hours: Average 193 hours  
Highest-857  
Lowest - 18

### Commissioned Service

Average 12½ years  
Longest - 17 yrs.  
Shortest - 2 yrs.

50% of navigators are Regular Officers  
50% of navigators are Reserve Officers

FROM: 12th Special Operations Squadron (SA)

21 Oct 1968

SUBJECT: List of Accidents, Combat Losses and Fatalities

TO: 12th SOSQ (C)

1. The following is a chronological listing of aircraft accidents, combat losses and fatalities which occurred during Ranch Hand primary mission operations, ie defoliation.

- a. 20 June 1966 - Combat Loss.  
Aircraft lost due to enemy ground fire.  
Three crewmembers, all rescued.
- b. 31 October 1966 - Combat Loss.  
Aircraft lost due to enemy ground fire.  
Three crewmembers, all rescued.
- c. 31 January 1967 - Combat Loss.  
Aircraft lost due to enemy ground fire.  
Five crewmembers, all fatalities.
- d. 21 May 1967 - Pilot killed in combat.  
No aircraft loss.
- e. 20 July 1967 - Combat Loss  
Aircraft lost due to enemy ground fire.  
Five crewmembers (4 US. 1 VN), all fatalities.
- f. 24 May 1968 - Combat Loss  
Aircraft lost due to enemy ground fire.  
Three crewmembers, all fatalities.

2. Primary mission summary:

Accidents - 0  
Combat Losses - 5 aircraft  
Accident Fatalities - 0  
Combat Fatalities - 14 (13 US. 1 VN.)

3. The following is a chronological listing of aircraft accidents involving Ranch Hand crews and aircraft which occurred during other than primary mission operations, ie airlift and training:

- a. Feb 1962 - Major Aircraft Accident.  
Aircraft lost while on a training mission.  
Three crewmembers, all fatalities.

b. May 1962 - Major Aircraft Accident.

Aircraft lost while attempting a take off from a short field while on an airlift mission.

Four crewmembers - no fatalities.

c. 4 September 1967 - Four crewmembers lost while riding as passengers in 19th ACS aircraft.

d. 5 October 1968 - Minor Aircraft Accident.

Aircraft landed gear up while on an airlift mission.

Three crewmembers, no fatalities.

4. Other than primary mission summary:

Accidents - 3

Fatalities - 7

5. Overall Summary:

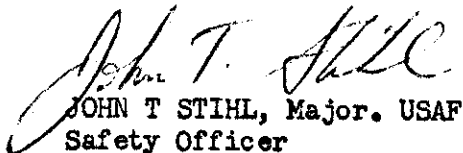
Accidents - 3 (2 major, 1 minor)

Combat losses - 5

Accident Fatalities - 3

Combat Fatalities - 14 (13 US., 1 VN.)

Passenger Fatalities - 4

  
JOHN T STIHL, Major. USAF  
Safety Officer