

Chronology of Herbicides in Thailand

There are numerous references from Buckingham's Office of Air Force History Ranch Hand document concerning the delegation of authority to approve future defoliation operations sprinkled in this document. The first follows.

Page 66 and 67: The author describes the Secretary's first efforts to delegate the use of herbicides. "Secretary McNamara's primary thrust in November 16, 1962, was to delegate jointly to the Ambassador and COMUSMACV..." "The general authority was approved by President Kennedy on November 30, 1962, but was limited to clearing roadsides, power lines, railroads, and other lines of communications, and the areas adjacent to depots, airfields, and other field installations."¹

A test was conducted in Thailand according to the Scientific Advisory Group Working Paper No. 10 - 68, "A Review of the Herbicide Program in South Vietnam", authored by William F. Warren, and approved by Roy F. Linsenmeyer, Chief, Scientific Advisory Group which stretched through 1965. This segment was also included in the Alvin Young collection, dated January 1966, in a declassified report "Vegetation Analysis of Pranburi Defoliation Test Area I, 66-007, from the Defense Documentation Center, Defense Logistics Agency, Cameron Station, Alexandria, Virginia. The authors, Captain John W. Kelly Jr., USA and Amnuay Kaosingha indicate the page was added by Alvin Young and documents both the 1964 and 1965 tests. While these tests were conducted approximately 100 miles SSW of Bangkok, Thailand, the tests mark the beginning of herbicides in Thailand.

Page 15: F. Thailand Tests 1964 – 1965:

"A test program was conducted in Thailand 1964 and 1965 to determine the effectiveness of aerial applications of Purple, Orange, and other candidate chemical agents in defoliation of upland jungle vegetation representative of Southeast Asia on duplicate 10-acre plots. Area spray treatments were applied at rates of 0.5 to 3.0 gallons per acre on two test sites representing tropical dry evergreen forest and secondary forest and shrub vegetation. Applications were repeated in alternate 2- to 3-month periods to determine minimal effective rates and proper season of application."²³

Additionally, the well documented work of Paul Frederick Cecil identifies sorties flown from four Thai Air Bases by Ranch Hand aircraft against targets in Laos. The author excerpts include Ranch Hand sorties flown against Laos from NKP and Takhli in 1966, Ranch Hand C-123s often visiting Clark AB, Philippines, mission sorties against Laos in November 1968 from Udorn, from Ubon in January 1969, and again from Udorn in August 1969, permission was given to use herbicides on base perimeters in Thailand with Embassy permission in 1969, aircraft were flown to CCK, Taiwan for maintenance (1966 - 1970) and Kadena AB, Okinawa in 1970 for corrosion control caused by insecticides. As the mission in Vietnam wound down (circa 1972) due to the negotiated peace treaty, supplies of herbicides became available for defoliation of U-Tapao and Korat in June 1972.^{4 and 5}

Page 87: The Chapter "Flight To Squadron: More Planes, More Hits, More Problems" identifies that in 1966, after five years in Vietnam, "In February the Laos defoliation project spread north of the 17th parallel, to expose segments of the infiltration route along the North Vietnam/Laotian border. Some sorties on the northern sections of the trail were flown out of American bases at Nakon Phenom and Taklai, Thailand, with the concurrence of the Thai and Laotian governments."

Page 90: In the same chapter the author quotes a flightline controller, "...scrounged (stoled[,] begged and borrowed) any and every thing we could find on base...". Hence the stripped frame parked in the Ranch Hand area, of a Case tractor which had disappeared from the ramp at Clark Air Force Base in the Philippines at the same time a RANCH HAND aircraft transited the base."¹⁴

Page 97: Additionally it is noted in the chapter the following, "Although mangroves were highly susceptible to Orange herbicide, by November it was evident that the reduced rate was ineffective, confirming data from the previous test in Thailand."²⁸

Page 156: The Chapter "New and Old: K Models and Airlift Duty" identifies a November 1968 mission to Udorn, Thailand. "On November 11, Colonel Larsen returned to Udorn with four UC-123Ks. For the next four days the spray planes attacked various targets in the Laotian complex."

Page 158: Finally, in the same chapter the author in documenting the obsolescence of the airframe notes a 1969 mission: "In addition to continuing attacks throughout South Vietnam, on 17 January seven spray planes flew to Ubon, Thailand, to attack a target in Laos the following day. The mission was uneventful, and the planes returned to Vietnam without being hit."⁵

There is much information highlighted in Mr. Buckingham's Ranch Hand document which details chronological changes in the approval process, certain approvals, and the workings of the approval process; however, my focus is on the phase out

of Ranch Hand and the subsequent approval of the use of herbicides in the following excerpt from Pages 172, 174, 179 and 183.¹

"In early December 1970, Ambassador Bunker and General Abrams decided, on the basis of a report prepared by their staffs in Saigon, to completely phase out the crop destruction program. General Abrams stopped any further procurement of white and blue herbicides. The herbicide stocks on hand in South Vietnam were adequate to defoliate base perimeters and to carry out highly selective crop destruction missions until about May 1971."

"Laird said that during this phase-out period, herbicide use would be restricted to remote, unpopulated areas and the vicinities of firebases and U.S. installations..."

"With the May 1, 1971, date approaching and American forces still in South Vietnam, American commanders sought to have the deadline for herbicide use extended. In April, General Abrams informed his forces that unless further authorization came in time, they were to stop all use of herbicides by May 1. The Joint Chiefs asked for continuing authority to spray base perimeters with herbicides blue and white. On April 28, Ambassador Bunker concurred with this request, noting that there was no satisfactory substitute for herbicides on base perimeters seeded with mines and trip flares."

"On May 13, 1971, Laird asked the President to extend the date for herbicide use by U. S. forces to December 1 or until South Vietnamese could take over the job..."

"...Rogers said that if, however, Nixon felt that military considerations outweighed these political drawbacks, he should not extend the deadline beyond December 1 and should restrict herbicides to base perimeters only, excluding fields of fire."

"... They concluded that herbicides needed to be used beyond the December 1 deadline. The most difficult problem, as before, was finding an alternative to herbicides for removing vegetation around mines, booby traps, and barbed wire."

"President Nixon reached a decision on the intertwined issues of continuing herbicide use and Vietnamization on November 26. He acceded to the Defense Department's request on the former and, without a future expiration date, authorized American forces to spray herbicides from ground equipment or helicopters, subject to controls applicable in the United States, around bases where mines, booby traps, or wire ruled out other methods."

The "Corona Harvest" Special Report confirms lagging documentation of changing authorities for use of herbicides on August 23, 1968.⁶

The preceding information confirms the use of herbicides on base perimeters without an expiration date and the establishment of approval procedures documented in "The CHECO Report: Base Defense in Thailand", February 13, 1973.⁷

This same authority and approval procedures are evidenced in the request for herbicides after sapper attacks at four bases in Thailand between 1968 and 1972. The need for the use of herbicides is evident also.

Page 58: The author documents the need. "To further aid in observation, herbicides were employed to assist in the difficult task of vegetation control. Use of these agents was limited by such factors as the ROE and supply problems."

Page 64 and 66: Again the problem of vegetation is documented:

Limitations

"Contiguous population centers at many of the bases severely limited opportunities for both observation and effective counterfire. Further, tropical vegetation aided by seasonal monsoon rains grew almost faster than it could be controlled. Dense jungles were rated as the greatest threat to the defenses at U-Tapao.¹³⁷ ...The extent to which vegetation has been cleared is graphically illustrated in the case of NKP. The photograph of that base on the following page shows the extent of vegetation inside the base perimeters in the early days of construction when the airfield was carved out of virgin jungle. An interesting comparison between NKP 1966 and NKP 1972 can be made by reference to the picture of that base that appears earlier in this report (See Figure 6.)"

Page 67 and 68: This excerpt documents the U.S. Embassy's ROE.

"Soil sterilization and herbicide use was also approved in 1969, but these were subject to extensive coordination with local RTG authorities and final permission from the Embassy. They could only be used on areas within the perimeter and under no circumstances could the vegetation control agents be used to clear areas of observation to fire off-base.¹⁴⁴ This lengthy process, and the inability to go beyond the fences, significantly limited the use of those agents at many bases.¹⁴⁵"

Page 68: In Base Analysis the report is definitive.

"Korat RTAFB. Vegetation control was a serious problem at this base in 1972, especially in the critical RTAF area near the end of the runway. The dense growth offered opportunity for concealment in the area contiguous to the unrevetted KC-135 parking ramp. Further, vegetation was thick in many sectors of the concertina wire on the perimeter. The base had received Embassy permission to use herbicides and had just begun that program in June."

Page 74 and 75: Continued in the report...

"U-Tapao RTNAF. Vegetation control was all but impossible over the entire reservation. Vegetation control was further hindered by the inability of the base to get herbicide through supply channels during the first half of 1972."

The indication is that herbicides became available in the same time period as Korat RTAFB.

References:

1. **"Operation Ranch Hand: The Air Force and Herbicides in Southeast Asia, 1961 - 1971" 1982, by William A. Buckingham, Jr. Office of Air Force History, United States Air Force, Washington, D.C.**
2. **Scientific Advisory Group Working Paper No. 10-68, "A Review of the Herbicide Program in South Vietnam", Date: August, 1968, by William F. Warren, approved by Roy F. Linsenmeyer, Chief, Scientific Advisory Group.**
3. **"Vegetation Analysis of Pranburi Defoliation Test Area I, 66-007, from the Defense Documentation Center, Defense Logistics Agency, Cameron Station, Alexandria, Virginia, by Captain John W. Kelly Jr., USA and Amnuay Kaosingha.**
4. **"RANCH HAND: Air Force Herbicide Operations in Southeast Asia", May 1984, A Dissertation by Paul Frederick Cecil.**
5. **"Herbicide Warfare: The RANCH HAND Project in Vietnam," © 1986 by Paul Frederick Cecil, published by Praeger Publishing.**
6. **"Corona Harvest, Defoliation Operations in Southeast Asia, A Special Report", Date: March 1970, by Colonel Eldon W. Downs, USAF and Lieutenant Colonel John H. Scrivner, Jr., Aerospace Studies Institute, Air University, Maxwell Air Force Base, Alabama.**
7. **FOIA Case 07 - 066: CHECO Report "Base Defense in Thailand 1968 – 1972", Date: February 18, 1973, by Major Barnette and Captain Barrow, USAF**