3 NOV 1971

MEMORANDUM FOR THE PRESIDENT

SUBJECT: Use of Herbicides

Do# 116

Reference is made to Dr. Kissinger's memorandum of 18 August 1971, which set forth your decision to permit the use of herbicides around fire bases and US installations when considered essential for the protection of US and allied forces. This memorandum called for the planned phase-out of herbicide operations in Vietnam and, as necessary, the introduction of alternate means for clearing perimeters be completed as rapidly as possible and not later than 1 December 1971.

Several alternative means for vegetation control have been attempted and although other means are practical in some circumstances, none are satisfactory for removal of vegetation in areas containing mines, booby traps and barbed wire. Continued use of herbicides BLUE and WHITE in these dangerous areas is essential. Lives have been lost as a direct result of the lack of adequate defoliation around fire bases and installations.

The date of 1 December 1971, was originally mentioned in a memorandum to the President dated 13 May 1971, which requested extension of the herbicide program until 1 December 1971, or until the RVNAF possess a herbicide capability of their own, whichever came earlier. The 1 December 1971 date, therefore, has no particular significance with respect to the involvement of US forces in RVN. It is expected that US personnel, fire bases and installations will still require adequate defense and protection beyond 1 December 1971.

Request authority, therefore, to continue the use of herbicides in areas which surround US fire bases and installations and contain mines, booby traps and barbed wire. This authority is required for as long as US forces are committed in RVN.

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THE SECRETARY OF DEFENSE 83-F01-1389
WASHINGTON D. C. 20301

1 9 FEB 1971

MEMORANDUM FOR THE PRESIDENT

SUBJECT: The Geneva Protocol

I refer to Secretary Rogers' memorandum concerning the future Congressional hearings on the Geneva Protocol of 1925.

I share Secretary Rogers' view that we reaffirm our position that riot control agents and chemical herbicides are not covered by the prohibitions of the Geneva Protocol. However, because of the safety of our forces, I cannot concur in his recommendation for "an immediate cessation of the use of chemical herbicides, in any form for any military purpose in Vietnam."

During the past two months, the policy regarding the use of herbicides in Vietnam has undergone intensive reviews by the NSC Under Secretaries Committee, by my Department, and by your Office. As you know, all uses of herbicides in Vietnam are governed by the same restrictions for their use in the U.S., and have been further restricted to use in remote, unpopulated areas or around firebases and U.S. installations. On 16 January 1971, it was ordered that the use of chemical herbicides for crop destruction be terminated. Consequently, Vietnam and its people are not being subjected to any greater risks than our own country and population through the use of herbicides. I consider that these actions have made our current herbicide operations in Vietnam completely justifiable in light of current domestic practices.

The above action: were taken with full awareness of the temporary risks to our forces and the detrimental effects on our military operations. I have concluded that any additional actions to speed up the phaseout of the herbicide operations prior to 1 May 1971 should be determined by General Abrams in reaction to the military situation in the field rather than dictated solely by the political situation in Washington. Retention of the option to employ herbicides around fire support bases and installations, and along certain important lines of communication is considered essential for the protection of U.S. and allied forces respecially as the VC/NVA forces revert to greater reliance on sapper and ambush tactics, and as we continue to withdraw more American troops.

In accordance with your directions, as indicated by Dr. Kissinger on 28 December 1970, we will seek your approval should we require an expansion of herbicide operations in Vietnam prior to 1 May 1971 or should it become necessary to extend herbicide operations beyond that date. We anticipate submitting a plan for an appropriate RVNAF herbicide capability for your consideration at a future date.

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S o feel Ownt Mr. Kenny

MEMORANDUM FOR THE PRESIDENT

UBJECT: Policy Regarding the Use of Herbicides in Vietnam (U)

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Reference is made to Dr. Kissinger's memorandum of 28 December 1970, which stipulated that any extension of the current herbicide program in South Vietnam be submitted for your approval.

As you know, Ambassador Bunker and General Abrams indicated in December 1970 that US herbicide operations would be phased out in South Vietnam while preserving the option to reinstitute the program, if necessary. Since then, herbicide operations in Vietnam have continued to decline. During January, February and March 1971, only one fixed wing and approximately 25 helicopter missions were flown. The anticipated phase out date was 1 May 1971. X-07/3

In our memorandum of 19 February 1971, we indicated to you that we would seek your approval should it become necessary to extend herbicide operations beyond that date. The JCS have requested retaining the option to use herbicides around fire support bases and installations using helicopter and ground spray equipment. We support their request. Since the enemy is placing greater reliance on sapper and ambush tactics as we continue our redeployments, the option to use herbicides in this manner is deemed vital for the protection of US and allied forces. The perimeters of fire support bases and their surrounding fields of fire are the most critical areas requiring the use of herbicides. The presence of vegetation within and adjacent to their perimeter defenses compromises their security to an unacceptable degree. Most fire support base perimeters contain barbed wire entanglements, mines, booby traps, claymores and flame munitions. Burning or manually clearing unwanted vegetation would require physical removal of these devices, a procedure which not only constitutes an unwarranted personnel hazard, but also degrades the perimeter defense while the ordnance is inactive. Alternate non-mechanical means of clearing vegetation, such as using petroleum products are relatively inefficient, are more expensive to use than herbicides, and are known to cause permonent soil damage.

We are currently evaluating a JES plan for a limited herbicide capability for the RVNAF. This plan will be forwarded for your consideration. However, until the RVNAF possess a herbicide capability (or until 1 December 1971, whichever is earlier), we request authority for US forces to continue to use herbicides as needed around fire support bases and installations. Our current military objectives do not call for more extensive use of chemical herbicides in Vietnam at this time. Furthermore, there are no restraints under international law nor under the Geneva Protocol, should the United States become a party to that agreement, regarding their use in Vietnam. If this request is approved, the existing stocks of herbicides

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BLUE and WHITE in RVN will be used for such operations. The USDA restrictions governing the use of these herbicides in the US will still be applicable in RVN during this extension.

The Secretary of State will provide his comments concerning this request in a separate memorandum.

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THE SECRETARY OF DEFENSE

Appeal Pocument # 4

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2 2 DEC 1970

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MEMORANDUM FOR THE PRESIDENT

SUBJECT: Policy Regarding Use of Herbicides in South Vietnam

I want to report to you on the continuing actions we are taking, at your direction, to reduce the use of herbicides in Vietnam and to advise you that new steps will be taken so that there will be strict conformance in Vietnam with policies governing the use of herbicides in the United States.

The present ban on the use of the herbicide known as "ORANGE" remains

Additionally, Ambassador Bunker and General Abrams have advised that they are initiating a program which will permit an orderly, yet rapid phase-out of the use of other herbicides while preserving the option to reinstitute this program, if necessary, to assure the protection of American lives. During the phase-out, the use of herbicides in Vietnam will be restricted to remote, unpopulated areas or around firebases and US installations in a manner currently authorized in CONUS.

In short, any herbicides used in Vietnam henceforth will be used only under conditions which would apply in the United States.

As a result of new orders to the field, herbicide use in Vietnam will be such that the stresses and risks involved are no greater than those sustained by the United States population and the United States environment in normal peacetime activities.

I recognize, of course, that there could be some temporary risks to our forces as a result of these decisions. Should the military situation change as a result of an increase in the enemy level of activity, we would need, of course, to reassess this policy in order to assure the protection of American lives, particularly as we withdraw thousands of additional US military personnel from South Vietnam in accordance with your program.

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THE SECRETARY OF DEFENSE WASHINGTON. D. C. 20301

Honorable William P. Rogers Secretary of State Department of State Washington, D.C. 20520 1 9 FEB 1971

Appel Document #5

Dear Bill:

I am unable to concur in the proposed memorandum for the President which you sent to me on February 2, 1971, calling for the President to decide to phase out immediately all herbicide operations in Vietnam. The main reasons for my non-concurrence are stated in the attached memorandum for the President.

In view of our position that the use of herbicides in Vietnam is not prohibited under the Geneva Protocol, I do not believe that the Senate Foreign Relations Committee or the Senate as a whole would be influenced in favor of ratification by our immediate termination of the herbicide program. Indeed, herbicides have teen used to satisfy urgent and legitimate military objectives in Vietnam in accordance with our current national policy which was formulated with full awareness of the provisions of the Geneva Protocol.

The Protocol, operating as a "no-first-use" agreement, is little more than an attempt to prevent any belligerent from resorting to the use of the prohibited weapons in warfare. Therefore, I believe that the President's decision to submit the Protocol to the Senate was primarily dictated by his expectation that ratification would be a useful and constructive step for proceeding with negotiations in the Conference of the Committee on Disarmament (CCD) in Geneva. These talks might lead to the effective controls, that the Protocol lacks, over chemical and biological agents (including herbicides).

The Senate Foreign Relations Committee should, of course, be kept advised of our herbicide policy—and in particular, that it satisfies our military objectives within the provisions of the Protocol. We have terminated the use of herbicides for crop destruction since this was no longer necessary to meet those objectives. They should further be advised that efforts at concrolling such agents as herbicides or riot control agents (RCAs) should proceed in the form of effective erms control agreements at the conference of the CCD.

Sincerely,

Attachment

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THE SECRETARY OF DEFENSE WASHINGTON, D. C. 20301

MEMORANDUM FOR THE PRESIDENT

SUBJECT: The Gereva Protocol

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Appeal Pocument # 6

I refer to Secretary Rogers' memorandum concerning the future Congressional hearings on the Geneva Protocol of 1925.

I share Secretary Rogers' view that we reaffirm our position that riot control agents and chemical herbicides are not covered by the prohibitions of the Geneva Protocol. However, because of the safety of our forces, I cannot concur in his recommendation for "an immediate cessation of the use of chemical herbicides, in any form for any military purpose in Vietnam."

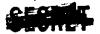
During the past two months, the policy regarding the use of herbicides in Vietnam has undergone intensive reviews by the NSC Under Secretaries Committee, by my Department, and by your Office. As you know, all uses of herbicides in Vietnam are governed by the same restrictions for their use in the U.S., and have been further restricted to use in remote, unpopulated areas or around firebases and U.S. installations. On 16 January 1971, it was ordered that the use of chemical herbicides for crop destruction be terminated. Consequently, Vietnam and its people are not being subjected to any greater risks than our own country and population through the use of herbicides. I consider that these actions have made our current herbicide operations in Vietnam completely justifiable in light of current domestic practices.

The above actions were taken with full awareness of the temporary risks to our forces and the detrimental effects on our military operations. I have concluded that any additional actions to speed up the phaseout of the herbicide operations prior to 1 May 1971 should be determined by General Abrams in reaction to the military situation in the field rather than dictated solely by the political situation in Washington. Retention of the option to employ herbicides around fire support bases and installations, and along certain important lines of communication is considered essential for the protection of U.S. and allied forces especially as the VC/NVA forces revert to greater reliance on sapper and ambush tactics, and as we continue to withdraw more American troops.

In accordance with your directions, as indicated by Dr. Kissinger on 28 December 1970, we will seek your approval should we require an expansion of herbicide operations in Vietnam prior to 1 May 1971 or should it become necessary to extend herbicide operations beyond that date. We anticipate submitting a plan for an appropriate RVNAF herbicide capability for your consideration at a future date.

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Support of The Republic of Vietnam With Defoliants/Herbicides

I INTRODUCTION

Herbicide operations are conducted in the Republic of Vietnam for two purposes; (1) defoliation, and (2) crop destruction.

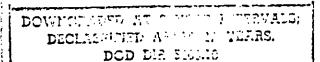
Defoliation operations are designed to destroy or control natural vegetation thereby exposing the sprayed area to visual observation and making enemy installations and activities more visible.

Crop destruction operations are designed to destroy crops which could accrue in substantial part to the Viet Cong (VC) and which cannot feasibly be protected from the VC or secured for Government of Vietnam (GVN) utilization or distribution.

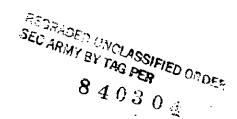
The military value of defoliation operations is well established. The crop destruction operations have proven to be an effective adjunct to the total military effort in Southeast Asia by (1) denying food to enemy troops, (2) diverting enemy manpower to crop production and (3) weakening enemy strength in selected target areas. However, because of the combined effect of a strong Communist propaganda campaign against the use of herbicides for crop destruction and widespread concern in political circles with pollution and ecological problems, the military utility of continued use of herbicides for crop destruction in the RV. after U.S. forces leave may be offset by a heavy political cost to both the U.S. and RVN governments.

Criticisms of the program center around: (1) the ecological effects of the use of chemical herbicides, (2) the implications of the crop destruction program in denying food to the enemy, and (3) the physical, political, and psychological effects on civilians.

Both the Midwest Research Institute and the Department of Agriculture conducted studies on the ecological effects of herbicides. They concluded that; (1) the destruction of vegetation is the greatest direct ecological consequence of using herbicides, (2) retaried regrowth of forests may result from repeated applications of defcliants, and (3) the possibility of lethal toxicity to humans, domestic animals or wildlife is highly unlikely.







Food shortages are probably the enemy's largest single problem. JCS reports indicate that MACV destroyed 120,000 tons of rice and other foodstuff (about 80% of the crop grown in VC controlled territory) in 1567, and captured documents reflect enemy food supply problems in targeted areas. However, local crop destruction cannot deny food to VC main forces if there is no effective control of food moving between VC controlled and secure areas. Thus, the crop destruction program could have a negative impact if it resulted in an increase of VC efforts to obtain food from secure areas.

Despite the fact that crop destruction programs are carried out in relatively sparsely populated areas, much of the burden still falls on civilians. When VC crops are destroyed, civilians are occasionally forced to give up their crops to VC. Furthermore, the GVN has failed to provide education at the province level for the herbicide program. Even psychological operations personnel at province level are often unaware of the herbicide program and its implications. As a result, the VC are active in exploiting the negative implications of crop destruction; a situation which could at least partially be alleviated by a more active psychological and indemification program.

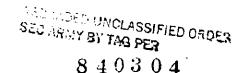
II BACKGROUND

The chemical agents used for defoliation/herbicide operations in RVN are called ORANGE, WHITE, and BLUE. Because of fetus deformations found in mice exposed to high doses of ORANGE its use was temporarily restricted by the DoD in 1970. The United States currently has a 2.4 million gallon stockpile of ORANGE, 1.4 million gallons of which have already been delivered to RVN forces. WHITE is the agent currently being substituted for ORANGE for defoliation operations. BLUE is used principally for anti-crop operations.

While the RVN receives supplies of herbicides for defoliation and crop destruction directly from the United States, their use is subject to the following very stringent control. This control is a joint effort by the U.S. and RVN.

A. On 29 June 1964, authority to approve US missions in support of GVN chemical crop destruction was delegated to the Ambassador, Saigon. Crop destruction requests must originate at Province level or below and be processed through parallel US and GVN channels to the Saigon level. Approval authority for crop destruction cannot be delegated below the joint US Ambassador and COMUS. ACV level.







- B. The responsibilities of the GVN are exercised through a Joint General Staff Committee, which meets, as necessary, to consider requests and to write directives for herbicide operations. It is composed of members from the Joint General Staff (J-2, J-3, J-5) and the RVNAF.
- C. All crop destruction operations must then be approved by a special interdepartmental committee. This committee includes representation from the Embassy, USAID, JUSPAO, CORDS, PsyCps, J-2 MACV and J-3 MACV.
- D. Following approval by the Ambassador and COMUSMACV, meetings of personnel from MACV and the unit flying the mission are held with the Province officials at the Province capital. Reconfirmation of the target to assure no incursion by friendly personnel must be furnished 24-48 hours prior to flying the crop destruction mission. Without this specific approval by the Province Chief, the mission will not be flown.

Defoliants and herbicides are currently loaded aboard US aircraft (C-123s) especially equipped to deliver them by US and RVN troops. The RVN does not own aircraft capable of delivering defoliants/herbicides. Any decision by the US to support the RVN with defoliants/herbicides after US combat troops left would necessarily have to be accompanied by a decision to provide them with the aircraft and equipment necessary to deliver them.

The following table shows the extent of US defoliant/herbicide operations since 1962

| Defoliation | /Herbicide | Operations |
|-------------|--------------|------------|
| Derotración | Liter Drorde | Operation |

| Year | Areas Defoliated a/ | Crop Areas Destroyed a/ | Total <u>Area</u> a/ | Consumption (1000 gal.) | Herbicide Co |
|-------|------------------------|----------------------------|-------------------------|-------------------------|--------------|
| 1962 | 20 | 3 | 23 | 15 | \$.11 |
| 1963 | 100 | ī | 101 | 59 | .43 |
| 1964 | 338 | 42 | 380 | 175 | 1.26 |
| 1965 | 630 | 267. | 897 | 621 | 4.47 |
| 1966 | 3,001 | 421 | 3,422 | 2,280 | 16.40 |
| 1967 | 6,018 | 896 | 6,914 | 5,774 | 41.60 |
| 1968 | 5,130 | 2 58 | 5,388 | 5,089 | 36.70 |
| 1969 | 4,944 | 266 | 5,210 | 4.559 | 32.80 |
| Total | | | | 18,572 | \$ 133.77 |

- Area coverages in KM². Some areas are defoliated at yearly intervals, while others are defoliated on a one time basis only. The areas that are re-defoliated account for about 16-20% of the yearly totals. However, since VC base camps are generally transitory in nature, areas sprayed for crop destruction are generally sprayed only once.
- b/ See page 4.





b Estimated using FY-71 prices and BLUE consumption equal to 10% of the total.

III ALTERNATIVES

Current U.S. plans are to supply the RVN with a capability to continue defoliation/crop destruction operations after U.S. force levels have stabilized at post-Vietnamization levels. Political reactions to these plans will depend on; (1) the amounts of defoliant/herbicide to be used, (2) whether or not herbicides are used for crop destruction, and (3) the degree of control over these operations exercised by the U.S.

Several alternatives concerning the use of defoliants/herbicides by the RVN once US troops leave are listed in the following paragraphs. The advantages and disadvantages of each are also given. The alternatives shown are not considered to be all inclusive, but have been selected in order to demonstrate the range of alternatives available. In each case a decision must be made concerning the degree of control which the US will maintain over the use of defoliant/herbicide operations once the RVN has the capability to conduct operations strictly on their own. The degree of control which we maintain could be the single most important political question to be answered before we agree to permit RVN use of defoliants/herbicides after US combat troops depart.

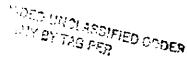
A. Alternative I

Provide the RVN with sufficient aircraft to deliver defoliant/ herbicides after US forces depart; do not replenish the RVN defoliant/ herbicide stockpile as current contracted and delivered supplies are used.

This alternative would allow the RVN to continue defcliation activities at current (FY-71) levels thru mid FY-73 (only thru FY-71 if ORANGE stockpiles could not be used or replaced with White). After their stockpile of defoliants/herbicides was depleted RVN delivery vehicles could be used for other missions such as troop and cargo transport.

This alternative has the advantage of minimizing adverse political reactions within the RVN and the United States which would otherwise accrue if we allowed the unrestricted use of chemicals in Vietnam. It would permit us to gradually phaseout the use of chemicals within the RVN.







However, political differences between the U.S. and RVN could arise due to our refusal to supply additional chemicals to the RVN. The credibility of the Nixon doctrine could also be questioned by our Asian allies. Enemy effectiveness could increase once RVN supplies were exhausted because; (1) they would have fewer food, manpower, and morale problems, and (2) there would be a greater probability that their activities and movements would remain hidden from RVN observation.

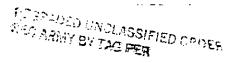
If the use of ORANGE for use in SVN was permanently restricted, an option (Alternative Ia) that would be available within this alternative is to replace ORANGE with WHITE on a gallon for gallon basis.

The annual and one time costs associated with this alternative are listed in the following table.

DEFOLIANT/HERBICIDE COSTS (FY-71 \$Millions)

| | Alternative I | Alternative Ia |
|-----------------------------------|--------------------|----------------|
| | • | |
| Annual Costs Herbicides | • | · |
| Orange . | - | - |
| White | - | 6.2 |
| Blue Delivery System | - | - |
| C-123 A/C 0&M | 2.8 | 2.8 |
| Total Annual Costs One Time Costs | \$ 2. 8 | \$9.0 |
| C-123 A/C (4) | \$2.8 | \$2.8 |







B. Alternative II

Provide the RVN with sufficient aircraft to deliver defoliants/herbicides after US forces depart SVN; provide the RVN with enough resources to continue defoliation/crop destruction operations indefinitely at projected FY 71 levels (1.4 million gallon/yr.)

This alternative would provide the RVN with a minimum operational capability only. Since projected FY 71 levels are based upon limited defoliant/herbicide supplies available due to the suspension of the use of orange herbicides, they represent just 25% of the total supply of White which MACV estimates are required to provide adequate defoliant/herbicide support.

The low level of effort specified in this alternative could have the advantage of keeping adverse political reaction within both countries to a low level while permitting the RVN to maintain a capability to deliver defoliants/herbicides.

An option (Alternative IIa) that would be available within this alternative is to provide only enough agent Blue for grass control and none for anti-crop operations. By eliminating significant supplies of Blue this option could further reduce the political problems associated with crop destruction activities.

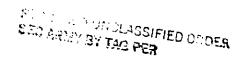
The disadvantage of restricting defoliation/herbicide operations to current levels would be to; (1) free some VC personnel which would otherwise be diverted from combat missions to food production and transportation missions, and (2) increase the areas in which enemy forces could operate undetected.

The annual and one time costs associated with this alternative are listed in the following table.

DEFOLIANT/HERBICIDE COSTS (\$Millions)

| | Alternative II | Alternative II: | |
|--|----------------|-----------------|--|
| Annual Costs Herbicides | | | |
| White Blue | \$5.8 1.3 | \$5.8 •1 | |
| Delivery System C-123 A/C O&M Total Annual Costs | 2.8 | 2.8 | |
| One Time Costs C-123 A/C (4) | \$9.9 | \$8.7 | |
| C+123 A/C (4) | \$2.8 | . \$2.8 | |





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C. Alternative III

Provide the RVN with sufficient aircraft to deliver defoliants/herbicides after US forces depart SVN; provide the RVN with enough defoliants/herbicides to perform all defoliation/crop destruction missions which MACV says are required.

The principle advantage of this alternative is that it fully supports RVN requirements and increases pressures on the VC by helping to expose their activities and increasing the severity of their food supply problems. It is consistent with the Nixon doctrine. It would permit continuation of a defoliation/crop destruction capability which could be used elsewhere in SEA if new hostilities require it.

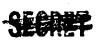
Acceptance of this alternative has a major political disadvantage in that it could open the governments of the US and RVN to criticism concerning the unrestricted use of chemicals in the RVN. This criticism could be ameliorated only somewhat through the use of an extensive public information program.

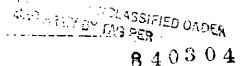
An option (alternative IIIa) that would be available within this alternative would be to completely prohibit the use of chemicals in anti crop operations. This option could help to alleviate the political problems somewhat.

The annual and one time costs associated with this alternative are listed in the following table.

DEFOLIANT/HEPBICIDE COSTS (\$Millions)

| | Alternative III | Alternative IIIa |
|-------------------------------------|-----------------|------------------|
| Annual Costs Herbicides | | |
| White | \$23.3 | \$23.3 |
| Blue Delivery System | 5:1 | •5 |
| C-123 A/C O&M Total Annurl Costs | 9.8 | 9.8 |
| One Time Costs | \$38.2 | \$33.6 |
| C-123 A/C (14) | \$ 9.8 | \$ 9.8 |







Support of The Republic of Vietnam With Riot Control Agents

I INTRODUCTION

The use of RCA munitions in South Vietnam has proved to be effective in reducing casualties associated with tunnel clearing, helicopter landing operations, helicopter reconnaissance, and encounters with mixed enemy and civilian groups. Bulk RCA delivered by helicopter is useful in area denial and channeling enemy movements. RCA munitions which can be fired from howitzers are effective in troop support by suppressing enemy fire and allowing contact with the enemy to be broken. When it becomes necessary to increase the degree of combat fire power RCA can also be used effectively in conjunction with high explosive (HE) munitions.

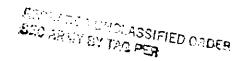
Although Communist propaganda has repeatedly attacked the use of RCA munitions as chemical or "gas" warfare, its use is generally accepted and condoned in U.S. public opinion. However, the use of RCA ammunition in conjunction with conventional munitions to increase enemy casualties could be construed as the use of lethal chemical weapons and such use may lead to proliferation of "casualty causing" chemical munitions by other countries.

II BACKGROUND

As U.S. troop strength declines and Vietnamization progresses, the Army of the Republic of Vietnam (ARVN) will be spread more thinly and this will necessitate some economy of force measures. RCA munitions could be effective in achieving such economies. Combat experience has shown that when RCA munitions are used in combat situations, fewer allied and civilian casualties result, and the combat mission is accomplished with the expenditure of smaller amounts of conventional munitions.

The only chemical agent currently used in RCA munitions is tear gas (CS, CS-1, and CS-2). It is used in grenades, artillery cartridges, in bulk form, and in various forms for aerial delivery. The development of persistent tear gas (CS-2) has made the use of bulk RCA for area denial and channeling enemy movements practical. The use of CS in 105mm cartridges provides the only all weather RCA munitions capability in the current U.S. arsenal.







Previous expenditures for RCA's are shown below.

RIOT CONTROL AGENT AND MUNITION COSTS (\$MILLIONS)

| | FY 69 | FY 70 |
|--------------------|----------------|---------------|
| Army Navy | \$ 52.9 9.6 | \$19.3 3.1 |
| Air Force Total | \$ 67.9 | \$ 25.1 |

III ALTERNATIVES

In considering the military and political implications of supporting the ARVN with RCA munitions, it is necessary to discuss; (1) the number and type of RCA munitions used, and (2) the manner in which they will be used. Several alternatives concerning the use of RCA by the RVN are listed in the following paragraphs. The advantages and disadvantages of each are also given. The alternatives shown are not considered to be all inclusive but have been selected in order to demonstrate the range of alternatives available.

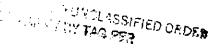
Since the United States as supplier of these agents would have to share the responsibility for any misuse of them, the degree of control which we maintain over their use could be the single most important matter to be considered in any agreement between the United States and the RVN.

A. Alternative I- Provide RCA munitions to U.S. residual forces only; provide no RCA to the ARVI.

The advantage of this alternative is that it does not make the U.S. vulnerable to criticism that it is encouraging proliferation of chemical weapons.

However, the South Vietnamese government would probably protest the withdrawal of RCA munitions by the U.S. The credibility of the Nixon doctrine would be questioned and the U.S. could be subject to criticism on the grounds that the U.S. would not allow RVN troops to use the same weapons that U.S. forces use. The cost to support the ARVN at a given level of effectiveness with only HE and improved conventional weapons would be higher because RCA munitions can be used more effectively in some situations. For example, several of the







conclusions reached by a recent OSD(SA) staff study were that, (1) tunnel clearing using TNT only would cost about \$250 and take 15 man hours; with tear gas and a blower the same task could be accomplished at a cost of about \$10 and would take only 2/3 man hours, and (2) softening a prepared enemy defense in order to achieve 30% casualties using only Improved Conventional Munitions would cost about \$63,000 and take 14 battalion volleys; with RCA munitions the same mission would cost only about \$2000 and take only one battalion volley.

This alternative would cost about \$10 million annually and \$50 million in FY 73-78.

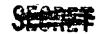
B. Alternative II - Provide all necessary RCA munitions except articlery munitions to both U.S. forces and ARVN forces.

This alternative would provide the ARVN with the same RCA munitions currently being provided. The level of support would be consistent with the ARVN force level (400,000 men). Additional munitions in the form of bulk CS-2 and cluster cannisters (CSXM15) would be provided for area denial and helicopter reconnaissance respectively. No 105mm RCA munitions would be provided.

This alternative could open the U.S. to criticism that it is encouraging proliferation of chemical munitions. However, since only short range munitions would be supplied, credence could be added to the assurance that they were only being used to reduce the number of casualties on both sides. This argument could mitigate criticism in the absence of evidence of flagrant misuse of RCA weapons in the field.

The question of misuse of RCA munitions by the ARVN is important. Short range RCA munitions when used by the ARVN clearly present the enemy with the options of surrendering or continuing to fight with degraded effectiveness. If the ARVN do not give the enemy the option of surrendering then criticism could be raised that RCA used in this manner constituted a lethal chemical weapon and the U.S. would share in this criticism.

Since the possibility of presenting the enemy the option to surrender is more remote with longer range weapons, the probability of such criticism is higher if such weapons are used. There is no assurance how the ARVN, with limited military resources and fighting for national survival, would use RCA munitions.



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A disadvantage of this alternative is that it deprives the ARVN of an all weather RCA delivery capability which could be important in blunting VC attacks during the monsoon season.

The costs of this alternative are shown in the following table.

RIOT CONTROL AGENT AND MUNITION COSTS (\$MILLIONS)

| | Annual | FY 73-78 |
|---------------------|--------|----------|
| U.S. Residual Force | \$10.0 | \$50.0 |
| ARVN a/ | 2.3 | 11.5 |
| ARVN b/ | 5.0 | _25.0 |
| Total | \$17.3 | \$86.5 |

- a/ Includes only types of RCA munitions currently provided to the ARVN (Grenades, grenade launchers, bulk RCA).
- b/ Includes additional CS-2 for area denial and channeling enemy movements, and cluster cannisters for helicopter use.
- C. Alternative III Provide RCA munitions to both U.S. residual forces and ARVN forces with no restrictions.

This alternative is identical to Alternative II except that in addition, it supplies the ARVN with 105mm RCA cartridges. It provides them with an all weather RCA munitions delivery capability and fully supports the Nixon doctrine.

This alternative would not only subject the U.S. to the same criticism as would Alternative II but also with the added criticism associated with the use of the 105mm RCA cartridges. Any ARVN use of them in conjunction with the use of HE rounds to increase casualties would further complicate our political problems. This alternative would be more subject to criticism because of the ease with which public opinion could grasp the concept (however mistaken) that the use of long range artillery does not give the enemy the choice of surrendering.





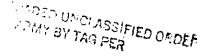


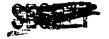
The costs of this alternative are shown in the following table.

RIOT CONTROL AGENT AND MUNITION COSTS (\$MILLIONS)

| | Annual | <u>FY 73-78</u> |
|---|------------------------------|---------------------------------------|
| U.S. Residual Force ARVN a/ ARVN b/ Total | \$10 2.3 7.5 \$19.8 | \$50 11.5 <u>37.5</u> \$99.0 |

- Types of CS munitions currently provided to ARVN (Grenades, grenade launchers, bulk CS agent).
- b/ Additional munitions required for all weather RCA delivery capability, helicopter recommaissance, and persistent CS for area derial. Includes 105mm cartridges for use during periods when air delivered RCA is precluded by weather.





WHITE HOUSE STATEMENT ISSUED ON SATURDAY 26 DECEMBER 1970

In response to the President's direction to reduce the use of herbicides in Vietnam, the Secretary of Defense has reported the following actions to the President:

- --- Steps are being taken to assure that there will be strict conformance in Vietnam with policies governing the use of herbicides in the United States.
- --- Ambassador Bunker and General Abrams are initiating
 a program for an orderly, yet rapid phase-out of the herbicide
 operations.
- --- During the phase-out, the use of herbicides in Vietnam will be restricted to the perimeter of fire bases, in U.S. installations, or remote unpopulated areas.
 - --- The ban on herbicide known as "ORANGE" remains in effect.

December 29, 1970

Jerry W. Friedheim, Acting Assistant Secretary of Defense for Public Affairs, made the following statement today:

"Secretary of Defense Melvin R. Laird has, as we have previously reported, taken steps to insure that herbicide usage in South Vietnam will conform to the policies governing usage in the United States. As a result, the stresses and risks involved in South Vietnam will be no greater than those sustained by the United States population and the United States environment in normal peacetime activities."

"Deputy Secretary David Packard last spring restricted all use of defoliant ORANGE, and that ban remains in effect. In addition, at that time use of other defoliants (BLUE and WHITE) was strictly limited to areas remote from population.

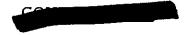
"General Abrams is now initiating in South Vietnam an orderly phaseout of the herbicide operations to be completed by next spring.

"It is important to note that estimated herbicide coverage for 1970 through September is 75 percent less than that for the same period in 1969."

THE WHITE HOUSE

WASHINGTON

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December 28, 1970

MEMORANDUM FOR

THE SECRETARY OF DEFENSE

SUBJECT:

Policy Regarding the Use of Herbicides

in Vietnam

The President has asked me to thank you for your report on the continuing actions you are taking to reduce the use of herbicides in Vietnam and particularly the steps taken to ensure that there will be strict conformance in Vietnam with policies governing the use of herbicides in the United States.

The President has noted the initiation of a program which will permit an orderly, yet rapid phase-out of herbicide operations in Vietnam, while preserving an option to reinstitute the program.

The President has directed that an extension or any expansion of the current program and plans, if any, regarding Vietnamization of chemical herbicide capabilities be submitted for his approval.

cc: The Secretary of State

The Chairman, Joint Chiefs of Staff

"Sec Def Has Seen" 3 0 DEC 1970





THE JOINT CHIEFS OF STAFF WASHINGTON, D.C. 20301

JCSM-173-71 9 April 1971

MEMORANDUM FOR THE SECRETARY OF DEFENSE

Subject: Plan for the Support of the RVN with Herbicides (U)

1. (S) Reference is made to:

a. Your memorandum, dated 7 December 1970, which directed that the United States continue to support the RVN with chemical herbicides at a level to be determined by relevant military and economic considerations.

b. A memorandum by the Assistant to the President for National Security Affairs, dated 28 December 1970, subject: "Policy Regarding the Use of Herbicides in Vietnam," which directed that plans, if any, regarding Vietnamization of chemical herbicide capabilities be submitted for Presidential approval.

- 2. (S) CINCPAC has submitted a plan to provide the RVN Armed Forces (RVNAF) with a helicopter and ground-spray herbicide capability. Retention in-country of UC-123 fixed-wing aircraft and associated spray systems under US control will provide a capability to reinstitute large-area herbicide operations, if the situation requires. No plans exist to provide a fixed-wing herbicide capability to the RVNAF, although plans are contemplated if the temporary suspension of use of herbicide ORANGE is lifted and its use in remote areas of Southeast Asia is authorized.
- 3. (S) The perimeters of fire-support bases and their surrounding fields of fire are the most critical areas demanding the use of herbicides. Most contain barbed wire entanglements, mines, booby traps, claymores, flame munitions, and other personnel hazards that require physical removal prior to burning or manually

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removing unwanted vegetation. The presence of elephant grass or other vegetation within and adjacent to perimeter defenses of fire-support bases compromises their security to an unacceptable degree.

- 4. (S) Continued use of herbicides through helicopter and ground spray to preserve and enhance the security of US and allied bases and installations is considered essential. Alternate means, such as use of petroleum products, are relatively inefficient, can cause permanent damage to the soil, and would be more expensive than herbicides.
- 5. (S) Funds for procurement of herbicides and procurement and support of helicopter spray systems will be supplied by the Department of the Air Force. Funds for procurement and support of the ground spray system (not to include herbicides) will be supplied by the Department of the Army.
- 6. (S) In accordance with reference lb, the Joint Chiefs of Staff request that Presidential approval be obtained for the plan contained in the Appendix hereto to provide the RVNAF with a limited herbicide capability and that US Forces be authorized by the President to continue necessary defoliation around bases and capability to provide this support.

For the Joint Chiefs of Staff:

T. H. MOORER Chairman

Joint Chiefs of Staff

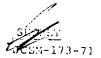
Attachment



APPENDIX

| PLAN FOR THE SUPPORT OF THE RVN WITH HERBICIDES (U) | 4. |
|--|-----------|
| 1. (S) Purpose. To provide a plan for the development of | 3 |
| the capability of the RVN Armed Forces (RVNAF) to conduct | 4 |
| herbicide operations by helicopter and ground spray equipment. | 5 |
| 2. (S) Assumption. Although this plan has been developed | <u> 6</u> |
| by the United States, it is assumed that the Joint General | 7 |
| Staff of the RVNAF will agree to and support concepts outlined | 3 |
| herein. | 9 |
| 3. (S) Current Operations. The combined Government of | 10 |
| Vietnam/US herbicide program consists of defoliation opera- | 11 |
| tions to improve the security of allied forces and instal- | 12 |
| lations. Herbicide operations are managed under a system | 13 |
| of stringent controls, and the RVN Army (ARVN) participates | 14 |
| in the approval of all spray plans. The RVNAF herbicide spray | 15 |
| capability is limited essentially to ground operations, using | 16 |
| hand sprayers. Helicopter missions are conducted by US per- | 17 |
| sonnel, using US resources. Although fixed-wing herbicide | 18 |
| operations have been terminated, the airframes and spray sys- | 19 |
| tems are being retained in-country under US control to permit | 20 |
| reinstitution of such operations, if required. | <u>21</u> |
| 4. (S) Concept. This plan will be implemented in two con- | 22 |
| current phases: | 23 |
| a. Phase I will be devoted to training and equipping | 24 |
| the RVNAF, i.e., RVN Air Force (VNAF), to conduct heli- | <u>25</u> |
| copter spray missions to defoliate fields of fire and | 26 |
| the perimeters of bases and installations. During this | 27 |
| period, helicopter spray systems will be provided on a | 28 |

GROUP 4 DOWNGRADED AT 3 YEAR INTERVALS DLCLASSIFIED AFTER 12 YEARS



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basis of one for each ARVN corps headquarters and two for

each APVE division. The equipment will be maintained by

Appendix

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VNAF maintenance personnel. Initial maintenance of systems and training of VNAF personnel will be provided by US Army personnel. The ground commander will coordinate with the VNAF on helicopter support required for missions.

b. During Phase II, one ground spray system will be provided to each corps and division to complement the helicopter spray system. COMUSMACV will transfer all herbicide management functions to the RVNAF, including complete responsibility for accountability of herbicides, and will provide technical advice and additional support, as required. Subsequent to Phase II, the RVNAF will unilaterally conduct defoliation missions by helicopter and ground spray systems, with minimal technical assistance from US advisory personnel. Fixed-wing herbicide spray assets will remain under US control, available for employment in high-priority contingency operations.

5. (S) Logistics

a. Spray Equipment. The implementation of this plan will require procurement/transfer of 43 helicopter spray systems 19 and 15 ground spray systems for an estimated cost of 20 approximately \$440,000.

| Required Equipme | nt1/ | In-cou Invent | - 4 | | Total Procurement | 22 |
|------------------------|------|------------------|-----|---------------|----------------------|----------|
| Description | No. | RVNAF | US | Unit Cost | Cost | 24 |
| Helo Spray System | 432/ | 0 | 15 | \$13,000(est) | \$364,000 | 25 |
| Ground-Spray System | 16 | 1 | 1 | \$ 4,500(est) | \$ 67,500 | 26 27 |

^{1/} Figures used are for helicopter and ground spray systems
 currently in use, i.e., the AGAVENCO helicopter system and
 the BUFFALO TURBINE sprayer/duster. These are included for
 concept only; specific determination of the most efficient/
 economical system for use will be made following approval
 of the concept. Costs of alternate systems are not expected
 to reach those of the AGAVENCO and BUFFALO TURBINE and
 could result in significant reductions in overall cost.
2/ If the AGAVENCO spray system is used, only 28 spray systems
 need be procured. The remaining 15 spray systems will be
 transferred from the US Army to the VNAF for use as a
 maintenance float. US experience has shown that a high
 maintenance float is required. If other than AGAVENCO spray
 systems are to be used, more than 28 systems must be procured
 in order to provide the required maintenance float.



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b. Herbicides

(1) Herbicide stocks are consigned to the Government of Vietnam upon arrival at the RVN ports. Current in-country stocks are listed below. The amounts shown for BLUE and WHITE will support the program well into FY 1972.

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- (a) BLUE. Approximately 200,000 gallons.
- (b) WHITE. Approximately 136,000 gallons.
- (c) ORANGE.* Approximately 1,600,000 gallons.
- (2) A preliminary estimate of \$2.0 million has been submitted for FY 1972 procurement of herbicides. This estimate is being reviewed and will be finalized, based on the Joint General Staff concept of future RVNAF herbicide operations.
- c. Priority of maintenance and spare parts stockage will be given to helicopter spray systems.
- 6. (S, Training. Senior advisers in each military region will develop and implement plans for training of selected RVNAF personnel in herbicide operations, including planning, operation, and maintenance of spray systems, techniques of employment, and controls and precautions on the use and storage of herbicides.

^{*} Use of GRANGE is under temporary suspension, pending completion of investigation of alleged health hazards associated with its employment.

