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STATEMENT OF
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FEDERAL PERSONNEL AND COMPENSATION DIVISION

BEFORE THE
COMMITTEE ON VETERANS AFFAIRS
U.S. SENATE

SEN 03900

ON
[AGENT ORANGE]



MR. CHAIRMAN AND MEMBERS OF THE COMMITTEE:

I am pleased to be here to discuss our work on the herbicide known as "agent orange," a subject of great concern to many Vietnam veterans.

From 1965 to 1970 the Department of Defense (DOD) - S sprayed 10.65 million gallons of agent orange in Vietnam. Over 2 million military personnel served in Vietnam during this period. Since 1977, Vietnam veterans have been contacting the Veterans Administration¹⁶ (VA) about health problems which they believe were caused by herbicides in Vietnam. By September 30, 1979 about 4,800 people had requested treatment at VA health care facilities for health problems they believed were related to herbicide exposure, and about 750 people had submitted herbicide related compensation claims.

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SUMMARY OF OUR FINDINGS

In our earlier reports we noted that the Government's actions to resolve veteran's concerns have been hampered by the lack of conclusive scientific information on the long-term health effects of exposure to TCDD, the dioxin contaminating agent orange, and the lack of personnel information to document troops' actual exposure or the degree of exposure. In our April 6, 1979 report "Health Effects of Exposure to Herbicide Orange in South Vietnam Should Be Resolved," we recommended that DOD, with the assistance and guidance of an appropriate interagency group, conduct a survey of any long-term medical effects on military personnel who were likely to have been exposed to herbicides in South Vietnam. The Air Force has since initiated a health effects study of herbicide handlers and aircraft crew members involved in operation "Ranch Hand." DOD believes these individuals had the greatest potential for exposure.

Senator Charles Percy requested us to continue our study and focus on when and what military units were in or near areas sprayed with agent orange. In our November 16, 1979 report "U.S. Ground Troops In South Vietnam Were In Areas Sprayed With Herbicide Orange," we found that from 1966 through 1969 a large number of U.S. ground troops were in and near areas sprayed with agent orange both during

and shortly after spraying. Our findings were based on review of operational reports from Army combat units, and a comparison of DOD herbicide spraying missions with Marine Corps troop locations. The information used in our Marine Corps comparison is readily available from the Marine Corps Archives and DOD.

Army records from the Vietnam conflict are neither complete nor well organized. As a result, we could not correlate Army troop locations with spraying missions. Instead, we reviewed 31 quarterly operational reports from 13 major Army combat units located throughout Vietnam and found that 10 of the 13 units reported using agent orange on perimeters, roads or crops, or fixed-wing aircraft missions in areas of operation. For example, the 11th Armed Cavalry Regiment reported the following agent orange sprayings from August 1, 1968, to October 31, 1968:

--Truck spraying of about 275 acres of base camp perimeter.

--Defoliation of 2 miles of communication lines.

--32 "Ranch Hand" missions flown in the unit's area of operation.

We concluded that some Army troops were close to areas sprayed with agent orange.

Monthly Marine Corps battalion reports contained detailed information on location, strength, and personnel turn-

over necessary to develop a data base to compare with agent orange spraying missions.

Our proximity estimates relate to marine and Navy medical personnel assigned to infantry battalions in I Corps--the northern section of South Vietnam--during 1966-69. During these 4 years, 2.18 million gallons of agent orange were sprayed in I Corps. Thus, about 20 percent of the agent orange used in Vietnam was applied in the area and time frame covered by our analysis.

We compared ground troop locations with agent orange missions, considering both the time and geographic proximity of battalion locations to spraying sites. We analyzed various time and distance combinations because many variables affect an individual's potential for exposure. Different estimates exist on both the life of dioxin and the drift of agent orange from target areas.

We estimate that about 5,900 marines were assigned to units within half a kilometer of areas sprayed with agent orange on the same day, while about 16,100 marines were within half a kilometer of sprayed areas within 4 weeks of spraying.

ONGOING HEALTH EFFECTS STUDIES

As you know, several studies of dioxin's effect on human health in addition to the "Ranch Hand" study are currently being conducted. Most recently, the VA was mandated by Public Law 96-151 to conduct a study of the long-term health

effects of dioxins on Vietnam veterans. We understand that the VA study will focus on ground troops who had a high potential for exposure. We suggest that VA use our Marine Corps data base for their study. The names and last known addresses of these marines can be obtained from Marine Corps records, so the VA can begin contacting individuals they wish to study.

We hope these ongoing studies will provide some answers on the long-term effects of dioxin exposure on human health.

PROBLEMS IN DETERMINING EXPOSURE

While it is possible to determine which marine units had the highest potential for exposure based on time and geographic proximity to spraying missions, troops' actual exposure or the degree of exposure cannot be documented from available records. Two factors which impact on this problem are the organization and detail of unit and personnel records, and the environmental fate of dioxin.

At present, the Army's Vietnam records cannot be readily accessed because they are not organized or indexed. It also is not possible to determine if the Army's records for this period are complete. A substantial investment of staff, time, and money would be necessary to organize and index these records in order to determine if specific Army units were in or near sprayed areas during or shortly after spraying. However, the Army's records do not document whether troops were actually exposed or the degree of exposure.

Even if it was possible to determine all military units which were in or near sprayed areas, it would be necessary to consider the environmental conditions which existed at the time of spraying in order to determine exposure or its degree. Many variables affect how much of the dioxin in agent orange reached the ground, how long the dioxin stayed in the environment before it biodegraded or photodegraded, and whether dioxin entered the food chain. Wind conditions, sunlight, rain, type of foliage, terrain, and the method of spraying all affect the environmental fate of dioxin. It would be difficult to recreate all these variables in order to determine troops' actual exposure or degree.

CONCLUSIONS

The Government's efforts to resolve veteran's concerns continue to be hampered by the lack of conclusive scientific information on the long-term health effects of exposure to dioxin, and the lack of personnel information to document troops' actual exposure or the degree of exposure. Unfortunately, there are no quick fixes to resolve veteran's concerns over whether they were exposed to agent orange, and whether their health may be affected by exposure.

Hopefully, the ongoing studies will provide some answers on the long-term effects of dioxin on human health. Although military records do not document exposure, additional efforts to correlate troop locations with spraying

missions should be of some assistance in determining the potential for exposure. Marine troop locations can be readily correlated with spraying missions using existing information. However, a correlation of Army troop locations would be a costly and time consuming task.

In the short run, we believe emphasis should be placed on providing thorough and compassionate treatment of veterans with illnesses they believe are related to herbicide exposure.

That concludes my statement Mr. Chairman. My colleagues and I will be pleased to answer any questions the Committee may have.