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PRESENTATION TO THE HOUSE COMMITTEE ON VETERANS' AFFAIRS

SUBCOMMITTEE ON OVERSIGHT AND INVESTIGATIONS

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SUBJECT: Status of the Ranch Hand Study Concerning Agent Orange

STATEMENT OF: Major General Murphy A. Chesney
Deputy Surgeon General
United States Air Force

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MAJOR GENERAL (DR.) MURPHY A. CHESNEY

Major General (Dr.) Murphy A. Chesney is Deputy Surgeon General, Headquarters U.S. Air Force, Washington, D.C.

General Chesney was born November 29, 1927, in Knoxville, Tennessee, and graduated from Central High School near Knoxville in May 1945. He attended the University of Tennessee in Knoxville from September 1945 to March 1947 in an accelerated premedical program and graduated with a bachelor of science degree. He earned his doctor of medicine degree in June 1950 from the University of Tennessee's College of Medicine in Memphis.

In June 1951 he completed his internship at the Scott and White Hospital, Temple, Texas, and entered private practice as a surgeon and general practitioner at the Edgar Renegar Clinic in Levelland, Texas. A year later he moved to Rule, Texas, where he was associated with Dr. Robert E. Colbert in the Rule Clinic. While residing there he was elected president of the Chamber of Commerce.

General Chesney entered the U.S. Air Force in April 1955, attended the basic orientation course at Gunter Air Force Base, Alabama, and later the primary course in avaiation medicine at Randolph Air Force Base, Texas. In July 1955 he was assigned to the dispensary at Portland International Airport, first as flight surgeon and then as commander. He continued to serve as commander when the dispensary became a hospital.

From July 1957 to June 1960, General Chesney was at the University of Tennessee in Memphis where he completed his Air Force-sponsored residency in internal medicine. During his last year of residency he was appointed chief resident and was involved in several research papers and projects. He also served as a university instructor from July 1959 to June 1960. For the next two years he was assigned as chief of hospital services and chief of the Department of Internal Medicine at Homestead Air Force Base, Florida.

In May 1962 he transferred to the dispensary at Ben Guerir Air Base, Morocco, as commander. He moved to the 401st Tactical Hospital, Torrejon Air Base, Spain, in June 1963 and became deputy commander and senior internist.

General Chesney returned to the United States in June 1966 and assumed command of the 852nd Medical Group at Castle Air Force Base, California. He became director of professional services in the Office of the Command Surgeon Pacific Air Forces, in August 1969 and deputy command surgeon in June 1972. While there his duties included supervision of the professional medical care of patients, including combat-injured personnel, intratheater aeromedical evacuation, flight medicine, preventive medicine and bioenvironmental engineering, medical aspects of the drug abuse program and the prisoner of war release program.

In April 1973 General Chesney transferred to Headquarters Tactical Air Command, Langley Air Force Base, Virginia, as command surgeon. He moved to Brooks Air Force Base, Texas, in August 1978 where he was commander of the Air Force Medical Service Center. General Chesney served as director of medical plans and resources, Office of the Surgeon General, Headquarters U.S. Air Force, from January 1980 until assuming his present position in April 1980.

General Chesney is a member of the Society of Air Force Physicians, Society of Air Force Flight Surgeons, International Congress of Medical Astronautics and Cosmonautics and Phi Rho Sigma Medical Fraternity. He is a fellow of the American College of Physicians, fellow of the American College of Preventive Medicine and diplomate of the American Board of Internal Medicine.

He holds the aeronautical rating of chief flight surgeon. His military decorations and awards include the Distinguished Service Medical, Legion of Merit, Meritorious Service Medal, Air Force Commendation Medal, Air Force Outstanding Unit Award ribbon, National Defense Service Medal and the Spanish Cross of the Aeromedical Order of Merit, 2nd Class.

He was promoted to major general February 8, 1979, with date of rank July 1, 1975.

General Chesney is married to the former Mary Ann Wilson. They have four children: Murphy A. III, Charles Allen, Carol Jean and John Lowell.

Mr. Chairman and Members of the Committee

I am Major General Murphy A. Chesney, Air Force Deputy Surgeon General. I thank you for the opportunity to present an update on the progress of the Air Force Epidemiologic Study of its Ranch Hand personnel exposed to herbicides in Vietnam from 1962-1971. Lieutenant General Paul Myers presented a status report on this study November 18, 1981, before this Committee. I will bring you up-to-date on the progress since that time.

Herbicide Orange was one of several defoliants used during the Vietnam War to deprive the enemy of jungle cover and crops. It consisted of the agricultural herbicides 2,4-D and 2,4,5-T, with its manufacturing contaminant dioxin. Increasing concern in the late 1970s over the potential long-term health effects from exposure to these chemicals led to a commitment by the Air Force to design and implement a comprehensive epidemiologic study of the health of the aircrew members and support personnel involved in the dissemination of the defoliants. This group was selected because their exposures were heavy and frequent, and records were available which permitted identification of the individuals involved.

A study protocol was developed in 1979 for an indepth epidemiological investigation consisting of three integrated elements: (1) a mortality study (death), (2) a morbidity study (disease, including birth defects in offspring), and (3) follow-up. The protocol was subjected to extensive scientific peer review during 1979 and 1980. Final approval for the study was given in the fall of 1980 and work was begun on the study.

The initial mortality phase of the study is nearing completion at this time. As of December 31, 1981, we had 60 Ranch Hand deaths with full documentation for each: 22-killed in action; 18-accidental deaths; 3-suicides; 1-homicide; 2-malignant neoplasm; 1-endocrine, nutritional, metabolic and

immunity disorder; 9-diseases of the circulatory system and 4-diseases of the digestive system. We have learned this year of 7 more deaths for which we are in process of obtaining additional information. Data collection for this study continues on a daily basis. Although more extensive analyses and comparisons remain to be done, preliminary findings indicate that the overall crude mortality of the Ranch Hand and comparison groups have been very similar. Based on the 60 deaths identified, excluding the 22 killed in action, no statistically significant differences in total death rates have been found between the Ranch Hand group and the comparison group. Both groups appear to have experienced significantly less mortality than a similarly aged U.S. white male population, indicating a healthy worker effect. However, thus far, very few deaths have occurred in the study groups, and these deaths represent only a very early assessment of mortality. The only preliminary interpretation that can be made from these data is that, thus far, the Ranch Hand group has had a mortality experience equivalent to that of an occupationally similar comparison group. Periodic reassessments of the mortality experience of the groups will be made. Definitive conclusions must await the completion of more detailed analyses and the accumulation of a larger number of deaths in the study groups in the coming years.

On September 18, 1981, Louis Harris and Associates were awarded a contract to administer face-to-face, in-home questionnaires to the participants selected for this phase of the study. Of the 2,486 subjects selected for the study, only one Ranch Hand and four comparison subjects could not be located. This location rate of 99.8% is very high for epidemiologic studies. Interviews were also planned with the current and former wives of the subjects, and with the next-of-kin of deceased individuals. These interviews began in October 1981, and are still in progress. As of September 1,

1982, 2,334 study subjects, 2,700 current and former spouses, and 75 next-of-kin interviews had been accomplished.

The participation of the subjects has been very gratifying. Currently, 97% (1,159) of the Ranch Hand subjects have chosen to participate in the questionnaire. Three percent (38) have declined to participate in the questionnaire. As expected, comparison subjects have participated at slightly lower rates, with 92% (1,145) of the originally selected comparison subjects completing the questionnaire phase of the study. Eighty of originally selected comparison subjects declined and 15 are still to be administered the questionnaire.

The Louis Harris contract has been extended until November 15, to provide questionnaire data on any comparison subjects who make late decisions to participate. The final receipt of data should take place within 30 days after the completion of these contracts. All comparison subjects declining the questionnaire and/or the examination have been or will be replaced with willing subjects, equally well qualified for inclusion in the study. These substitute subjects will all be interviewed and examined in the same manner as the other participants. This circumstance was anticipated in the study design, and provisions for the substitution were planned in the early days of the effort. This substitution process will ensure that the largest numerical set of data is available for maximum scientific validity.

The physical examination phase of the study is proceeding well. On November 25, 1981, the Kelsey-Seybold Clinic in Houston, Texas, was awarded the contract to conduct in-depth physical examinations and psychological evaluations of the participants. The examinations began on January 12, 1982. As of September 1, 1982, 1,645 examinations had been completed on

858 Ranch Hands, 757 primary comparison, and 30 replacement comparison subjects. There are an estimated 680 examinations yet to be accomplished. Sixty-six Ranch Hands declined to participate in the examination. There are still 235 Ranch Hands who are either scheduled or who have not yet reached a decision. If these all decline to participate, the final compliance will be 71% but could be as high as 90%, if all remaining agree to be examined. Of the original comparison group, 61% (757) have completed the physical examination; an additional 129 have declined. Two hundred and sixty-two still remain to be scheduled. If all these decline, compliance of the originally selected comparison group in the physical examination will be only 61%, but could reach 82% if all remaining subjects choose to participate.

The physical examination contract is being negotiated to terminate on or before December 15, in order to accommodate all of the individuals desiring to participate in the study. Each subject will thus be given the maximum opportunity to participate fully in this effort.

One problem due to a computer programming error has arisen since last November, and it has been successfully resolved. Eighteen percent of the comparison subjects initially selected from computerized personnel records for the questionnaire and examination phases of the study were found to be inappropriate for inclusion in the effort. Two hundred eleven of these had already been interviewed and 26 had been examined. All of these individuals were advised of the error and thanked for their assistance. Those who had not already been examined were offered a careful and complete physical examination at Air Force expense at the Air Force medical treatment facility nearest to their home. Other more appropriate subjects were entered into the study in their place. This "over selection" did not affect the scientific validity of the study.

The next nine months will continue to be very active. The contracts should conclude late this fall, and interim technical reports will be issued in early 1983, as promised to this Committee last November. A mortality report will be released in March, and preliminary reports on the data from the questionnaire and examination phases of the study will be available in the April-June time period.

The initial round of questionnaires and physicals will be the basis for the remainder of the study. Follow-up examinations will be a 3, 5, 10, 15 and 20 years.

In summary, this study is proceeding only slightly behind schedule. But please note that this is due to the unexpectedly high and favorable participation rates, the eligibility problems and unique logistical and scheduling difficulties encountered in a study of this scope. The Air Force investigators have continued to benefit from the interactions with the Advisory Committee on Special Studies Relating to the Possible Long-Term Effects of Phenoxy Herbicide and Contaminants, and they look forward to continuing this association. Close cooperation with the Veterans Administration in their study efforts will continue, and our investigators will continue their cooperative associations with national and international researchers in attempts to remain abreast of the current scientific work on phenoxy herbicides and dioxins. We will continue to work closely with this Committee, and other interested groups involved in the resolution of the herbicide issue. I will be pleased to answer any questions at this time.