AGENT ORANGE HIGHLIGHTS

• **DIOXIN REGULATION** The final rule governing the adjudication of disability compensation claims based on exposure to dioxin was published in the Federal Register August 26, 1985. See article on page 2 of this issue.

• **AGENT ORANGE EXAMS** Some VA medical centers are holding special Agent Orange clinics during weekend and evening hours to meet the number of requests for Agent Orange examinations. As of October 31, 1985, 205,478 initial Agent Orange examinations had been performed. See chart on page 2 for a comparison of the number of exams performed since the Agent Orange Registry Examination program began.

• **LOUISIANA REGISTRY** The Louisiana State Legislature voted to set up a registry for the families of Vietnam-Era military personnel who potentially were exposed to Agent Orange.

• **INDIANA ADVISORY COMMITTEE** The Indiana State Legislature has established an Agent Orange Advisory Committee which will hold public hearings throughout the state and submit a recommendation to the legislature on Agent Orange research.

• **WASHINGTON AGENT ORANGE PROJECT** Washington State Department of Veterans Affairs is providing information to veterans on the locations of herbicide spraying missions in Vietnam. Veterans are encouraged to get an Agent Orange examination and are sent a self-help guide, explaining about herbicides and giving addresses and phone numbers of the state's VA medical centers, Vietnam Veteran Outreach Centers (Vet Centers), service organizations and the Department's field offices.

• **LITERATURE REVIEW** Volumes V and VI of the herbicide literature review series has been published. For information on ordering the publications, see page 4 of this issue.

• **TEXAS AGENT ORANGE PROGRAM** The Texas State Legislature decided not to continue funding of the State's Agent Orange Program. The Program was officially closed on October 31, 1985. The University of Texas System Health Science Centers, which conducted clinical studies within the state, is expected to publish a final report on their findings some time in 1986.

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**Agent Orange Review** is prepared by VA's Office of Public and Consumer Affairs. The "Review" is published periodically to provide information on the studies being conducted by the Centers for Disease Control and other federal agencies, as well as information on VA services to Vietnam veterans.

For additional copies of this issue, write VA's Office of Public and Consumer Affairs (003F), 810 Vermont Ave., NW, Washington, DC 20420.

If you have any questions about your Agent Orange examination, contact the environmental physician at the VA medical center where you had the examination.

If you have questions about VA benefits, contact the VA facility nearest you. The phone number can be found in your telephone book under "U.S. Government" listings.

If you would like to be added to the mailing list to receive the "Review," please send your name, complete address and social security number (if you are a veteran) to the VA Data Processing Center (200/392), 1615 E. Woodward St., Austin, TX 78772, Attn: Agent Orange Clerk. Changes of address should be forwarded to the same Austin address, along with your mailing label.

If you know someone who has had an Agent Orange Registry exam and is not receiving the "Review," please have that individual follow the instructions just described in order to be added to the mailing list.

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**Ranch Hand Study Update**

Released by Air Force

The Air Force released in November 1985 the third mortality report on Ranch Hand personnel who were involved in herbicide spraying missions in Vietnam.

As was the case in the first and second reports, released in June 1983 and February 1985, the analyses did not reveal any statistically significant differences in mortality between the exposed group and the comparison groups.

(see Study, page 4)
The Veterans Administration issued a final regulation on August 26, 1985, concerning the adjudication of disability compensation claims based upon disabilities or deaths of certain veterans who, while in military service, were exposed to herbicides containing dioxin or to ionizing radiation.

The rule was required under the "Veterans' Dioxin and Radiation Exposure Compensation Standards Act," which was signed into law on October 24, 1984. (See February 1985 issue of "Agent Orange Review" for more detailed information on this legislation.)

The regulation applies to claims based on dioxin exposure during service in Vietnam; ionizing radiation exposure in connection with atmospheric testing of nuclear weapons; and radiation exposure during the occupation of Hiroshima or Nagasaki at the end of World War II.

The regulation requires that VA adjudicators grant the benefit of reasonable doubt to claimants when there is a balance of positive and negative evidence that neither proves nor disproves such a claim. The rule also contains criteria for denying claims if evidence shows that the illness was caused by the veteran's own misconduct or was not service-related.

Specifically, the rule recognizes that only chloracne (a skin disease) is connected with dioxin exposure. VA will acknowledge service connection if chloracne is manifested within three months of the veteran's latest departure from Vietnam. The rule further states that sound scientific and medical evidence does not establish a cause-and-effect relationship between dioxin exposure and porphyria cutanea tarda (PCT) and soft-tissue sarcomas.

The final rule also provides that interim disability or death benefits are payable to Vietnam veterans (or their survivors) who suffer from PCT or chloracne if manifested within one year after the veteran's most recent departure from Vietnam. These interim benefits may not be paid for any period prior to October 1, 1984, nor for any period after September 30, 1986.

Further, the VA Administrator is allowed to address claims for other diseases when evidence supports that the condition is related to in-service exposure.

In addition, the rule provides that the VA Administrator shall publish periodic evaluations of scientific or medical studies regarding the adverse effects of dioxin. The effective date of the regulation was September 25, 1985, except part of the regulation regarding the payment of interim benefits, which was effective October 1, 1984.

VA's AO Research Section Relocates

In September 1985, VA's Agent Orange Projects Office's Research Section was renamed the Office of Environmental Epidemiology (OEE) and moved to the Armed Forces Institute of Pathology (AFIP), located at Walter Reed Army Medical Center in Washington, D.C.

The relocation occurred under terms of an interagency agreement between VA and AFIP. OEE will continue to conduct VA-initiated research and, when mutually agreed upon, will provide support to AFIP.

Dr. Han K. Kang, former chief of the Agent Orange Research Section, has been named director of OEE.

The new address and telephone number are as follows:

**VA Office of Environmental Epidemiology**

Armed Forces Institute of Pathology

Washington, DC 20306-6000

202-576-0366

New Advisory Committee Met Twice in 1985

The Veterans' Advisory Committee on Environmental Hazards, established to counsel VA on the results of studies dealing with the health effects of dioxin and radiation exposure, has held two meetings since members were appointed last year.

The committee includes medical and scientific experts on the health effects of exposure to dioxin and ionizing radiation, as well as members of the general public, including one disabled veteran. The number of members in each category is determined by law. The expert members of the committee formed a Scientific Council that is subdivided into a panel to evaluate studies dealing with the health effects of dioxin exposure, and another to evaluate studies dealing with the health effects of ionizing radiation exposure.

The council is reviewing study findings to determine if sound scientific or medical evidence exists indicating a connection between various health problems and exposure. The council will be reporting to the full committee and the Administrator of Veterans Affairs.

The committee also has assisted VA in developing regulations dealing with veterans' disability compensation claims related to dioxin and radiation exposure.
Agent Orange Research Update

New York State Mortality Study

New York State has released the findings of a study comparing causes of death among Vietnam veterans and veterans with no Vietnam service. The findings revealed no significant statistical differences between the two groups.

Investigators collected data on men who had died in New York State (excluding New York City) during 1965-67 and 1970-80 who were between the ages of 18 and 29 during 1965 through 1971. (The years 1968 and 1969 were excluded, however, because veteran status was not noted on death certificates.) Men for whom data were collected would have been eligible for military service during the Vietnam Conflict. In this group of men, 22,494 deaths occurred. Of that number, 4,558 were Vietnam-Era veterans.

Investigators conducted interviews with a random sample of next-of-kin, and various data sources were used to match cause of death information and Vietnam service.

Final data contained information on 1,496 New York State Vietnam-Era veterans, 555 of whom served in Vietnam. Investigators compiled statistics on Vietnam experience and 26 causes of death. Comparisons were made between the two groups of veterans, with adjustments for age, race and education.

Investigators acknowledged that the comparison between veterans with Vietnam service and veterans with no service in Vietnam is limited by the small sample size and lack of information on herbicide exposure and confounding factors, such as the relationship between cigarette smoking and lung cancer. In addition, because certain diseases that may be related to dioxin exposure have lengthy latency periods, investigators determined that further study is necessary.

NCI-Sponsored Cancer Study

In March 1983, the Battelle Human Affairs Research Center in Seattle began a study to evaluate the incidence of cancer in relation to past exposure to phenoxy herbicides and other dioxin-contaminated chemicals.

Funded by the National Cancer Institute, the case-control study is being conducted in collaboration with the Fred Hutchinson Cancer Research Center, also in Seattle.

The primary focus of the study is soft-tissue sarcomas and non-Hodgkin's lymphomas. The study will concentrate on 13 counties in western Washington State where phenoxy herbicides were used for forestry management, weed and brush control, public lands and maintenance programs, and for which cancer incidence data for the population are available.

The study is concerned with occupational exposure only. One hundred thousand people -- or 3.5 percent of the population in Washington State -- hold jobs where prolonged exposure to dioxin-containing chemicals occurs.

The study is a retrospective study, evaluating the incidence of cancer with respect to possible past exposure to phenoxy herbicides and other substances containing dioxin. The frequency of exposure among both cases and controls also will be assessed.

Cases are being selected from the Cancer Center's Cancer Surveillance System, a population-based tumor registry. Two hundred soft-tissue sarcoma cases and 500 non-Hodgkin's lymphoma cases, ages 20 to 79, for the years 1981-1984 were identified from the tumor registry.

Controls (750) were matched to cases by age and vital statistics. The controls were selected from the same geographical area as the cases.

Intensive interviews were conducted that included questions on job history, residential history, military service, diseases and medication history, general health information and other personal data.

Researchers will evaluate the relationship of health effects to dose and duration of exposure; determine the latency period for dioxin-related effects; the interaction of other risk factors and any disease complications.

Forty job titles of work activities will be identified and the daily dose calculated for each type. The exposure will be classified as high, medium and low.

Additional risk factors also will be assessed, such as infectious diseases (polio), parasitic diseases (malaria), possible modifiers of immunity (blood transfusions), exposure to other chemicals, drug use and other factors such as diet and smoking.

Data from the questionnaires currently are being tabulated. Researchers began analyzing the data in mid-1985. The study is expected to be completed in 1986.

New York State Soft-Tissue Sarcoma Study

New York State has released the findings of a study of Vietnam veterans and soft-tissue sarcomas (malignant tumors) in which no association was found between the disease and Vietnam service.

The study attempted to determine whether men of draft age who developed soft-tissue sarcomas in later life were more likely to have served in Vietnam than an age-matched control group.

Researchers used the New York State Cancer Registry to identify all living and deceased men with soft-tissue sarcomas diagnosed from 1962 through 1980 who were between the ages of 18 and 29 during 1962 through 1981. The search identified 310 eligible cases.

Interviews were conducted with 281 men or their relatives. A live control group was selected and matched for each case (by birth, sex and zip code of residence).

Medical records and hospital pathology information were collected for all cases, and specimens were obtained for a subset of 108 cases.

A pathologist reviewed the specimens without knowing the military service status of the cases.

All diagnoses were classified according to the World Health Organization classification system for soft-tissue sarcomas.

Agent Orange Conference Held

More than 95 adjudication officers, environmental physicians and dermatologists attended the third Continuing Education Conference on Agent Orange, held in Washington, D.C., in August 1985.

The three-day conference provided updated information on Agent Orange related-issues, with a special emphasis on the development, diagnosis, treatment and prognosis of chloracne. Reports were presented by members of the Chloracne Task Force, and VA investigators gave progress reports on their research activities.

Additional presentations were made by representatives of the Centers for Disease Control, the Armed Forces Institute of Pathology, various universities and the Air Force.

Policy and future plans for dealing with Agent Orange issues also were discussed.

Other items on the conference agenda included Agent Orange examinations, reports on other non-VA Agent Orange-related studies, and Agent Orange litigation.
VA Updates Series
On AO Literature

VA has published volumes V and VI in its series of reviews of Agent Orange literature.

The in-depth review and analyses of worldwide scientific literature on the health effects of Agent Orange and other phenoxy herbicides was conducted by an independent organization under contract with the VA.

Volumes I and II of the literature review were published in 1981. Volumes III and IV, which covered published and unpublished literature since the original 1981 reports, were published in April 1984.

Volumes I and II were mandated by Public Law 96-151. VA has continued to publish subsequent volumes because of their contribution to assembling what is perhaps the largest body of references on herbicides in existence.

Lay-language summaries of all six volumes of the literature review also have been published.

The complete series and the lay-language summaries are on file at all VA medical center libraries.

Following is a complete listing of the literature review series. Volumes I through VI can be ordered from the Superintendent of Documents, Government Printing Office, Washington, DC 20402.

Volume I, Analysis of Literature, stock no. 051-000-00154-1, $9.00

Volume II, Annotated Bibliography, stock no. 051-000-00155-9, $9.50

Volume III, Analysis of Recent Literature on Health Effects, stock no. 051-000-0164-8, $9.50

Volume IV, Annotated Bibliography of Recent Literature on Health Effects, stock no. 051-000-0165-6, $3.25

Volume V, Analysis of Recent Literature on Health Effects, stock no. 051-000-00473-5, $2.75

Volume VI, Annotated Bibliography of Recent Literature on Health Effects, stock no. 051-000-00473-5, $2.75

As of December 1984, 55 Ranch Hand personnel and 285 comparison subjects had died. The number of deaths were determined, using Air Force, VA, Social Security Administration and Internal Revenue Service sources, as well as personal contacts. Death certificates were obtained on all subjects.

Data were analyzed to compare the death experiences in the Ranch Hand population with the comparison group. In addition, death experience in these groups was compared to the 1978 U.S. White Male Mortality Experience, the 1978 Department of Defense Nondisability Retired Life Table, the mortality experience of the West Point Class of 1956, U.S. Air Force active duty personnel and the active U.S. Civil Service population.

Ranch Hand officers, comparison group officers and comparison enlisted men are living significantly longer than expected.

A herbicide/dioxin exposure index was applied to the data, and no relationship between exposure and mortality experience was identified.

Analysis of data showed no increased Ranch Hand mortality for accidents, suicide, homicide, malignancy or circulatory system disease. No unusual patterns of malignancy were observed in either the Ranch Hand group or comparison groups -- a finding that would be expected from the small number of deaths to date.

A similar pattern was found when data were compared with the Defense Department retired population. All groups had mortality experience similar to the civil service population.

As was expected, all groups in this study had an increased mortality rate when compared to the Air Force population currently on active duty. This finding is due to the fact that individuals in the active duty population who develop severe chronic disease are medically retired. Both Ranch Hand and comparison group officers had mortality patterns similar to the West Point group.

The first (baseline) morbidity report of the Air Force Ranch Hand Study, released in February 1984, did not identify statistical differences between the Ranch Hand group and the comparison groups for illnesses commonly attributed to dioxin exposure.

Both the mortality and morbidity portions of the Air Force Ranch Hand Study will be updated over a 20-year period.