



**House
Legislative
Analysis
Section**

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THE APPARENT PROBLEM:

Vietnam veterans have claimed for many years that a number of health problems that they and their families have experienced are the result of the veterans' exposure in Southeast Asia to the powerful chemical defoliant Agent Orange, a combination of two herbicides and a toxic by-product, dioxin. These health problems include numbness, tingling and intermittent paralysis in the arms and legs; skin rashes (including chloracne, a severe skin condition which can last for years); liver disorders; kidney damage; loss of sex drive; psychological disturbances (including insomnia and radical mood changes); increased susceptibility to infections (immunosuppression); loss of appetite and weight; weakness; cancers (including rare, soft-tissue cancers); and reproductive health problems such as miscarriages, stillbirths, and birth defects in children born after the fathers returned from Vietnam.

For years the federal government refused to pay disability claims for exposure to Agent Orange on the grounds that there was no documented scientific proof of a causal relationship between exposure to dioxin and any disease other than chloracne. In the early 1980s, Congress did pass a law that required the Veterans' Administration (VA) to treat some conditions associated with dioxin exposure (such as chloracne and liver disorders) as "presumptive disabilities". The VA also was required to establish a free Agent Orange screening program and registry for veterans, but a report issued by the U.S. Government Accounting Office was highly critical of the VA's conduct of the screening and recommended that the registry be scrapped because it was so inadequate. Finally, the VA was to conduct comprehensive studies, but its effort here, too, was so inadequate that the task was given to the federal Centers for Disease Control, which are in the process of completing a validation study to demonstrate a correlation between exposure to Agent Orange and dioxin levels in the body before embarking on a much larger study.

Frustrated by the federal government's failure to address their concerns about Agent Orange exposure, Vietnam veterans across the nation began taking a number of steps to resolve some of these issues themselves. A class action product liability lawsuit was filed against the chemical manufacturers of Agent Orange (including Dow Chemical Company of Midland) in January, 1979. In 1984 the lawsuit was settled out of court for \$180 million, but the settlement was contested by some veterans' groups. The U.S. Court of Appeals, in New York, recently affirmed the settlement, but the federal government had been removed from the case. Even before the ruling and the removal of the federal government from the case, veterans had begun turning to their state legislatures for help. Since 1980, when New Jersey became the first state to do something about Agent Orange by creating a state Agent Orange commission, as many as 28 state projects or commissions have been established, though not all of them are currently in operation.

Various veteran groups in Michigan have requested state legislation addressing their concerns with Agent Orange.

AGENT ORANGE/BIRTH DEFECTS REG.

RECEIVED

House Bill 4460 as enrolled AUG 19 1987
Second Analysis (8-6-87)

Sponsor: Rep. Jerry C. Bartnik
House Committee: Military and Veterans Affairs
Senate Committee: Local Government and Veterans

THE CONTENT OF THE BILL:

The bill would add a section to the Public Health Code titled "Exposure to chemical herbicides", which would require the Department of Public Health, in association with a newly-created Agent Orange Commission, to conduct certain epidemiological studies on Michigan Vietnam era veterans and to establish a birth defects registry.

Epidemiological Studies

The Department of Public Health (DPH), in conjunction with a newly-created Agent Orange Commission, would conduct a number of epidemiological studies on Vietnam era veterans and publish an annual report which compiled and analyzed the information gathered from the studies and which recommended further actions to the commission. The report would be distributed to a number of veterans' organizations and appropriate governmental offices. Unless the report disclosed information about individuals who did not consent to the disclosure, the report would be available to the public under the Freedom of Information Act. No veteran would be required to participate without first giving written consent.

The department would be required to conduct three studies:

(1) Toxicological studies designed to determine the exposure of Vietnam era veterans to Agent Orange and other chemical agents. In conducting these studies, the DPH would have to look for the presence of dioxin in combination with a review of the veteran's military service locations. Information from these studies would be compiled into a report which would be submitted for review and publication by the Agent Orange Commission created by Senate Bill 218.

(2) Mortality studies of veterans, based on information gathered from the department's vital statistics records and from the Agent Orange registry data base to be established and maintained by the Agent Orange Commission created by Senate Bill 218. Information obtained from these studies would be used for further studies on the relative incidence of disease among Vietnam veterans.

(3) Studies of Vietnam veterans who have a history of cancer or other medical problems associated with exposure to chemical agents (including Agent Orange), or who have children with birth defects born after the veteran's suspected exposure. Levels of dioxin in the veteran's blood serum would be established in these studies.

Birth Defects Registry

The department would be required to establish a birth defects registry which would be used to provide information on birth defects and on possible associations between these occurrences and exposure to environmental hazards such as Agent Orange. The registry also would be used to develop strategies to reduce the incidence of birth defects among Vietnam veterans, their families, and the general population.

The department would establish by rule the kind of information that was to be reported to the registry.

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Reporting to the registry would have to begin within one calendar year after the bill was enacted. The department would be required to evaluate the information reported and to publish it in annual reports, with the first report published about 3 and 1/2 years after enactment of the bill.

Counseling services

In conjunction with veterans' counseling services, the DPH would be required to provide counseling and referral services for Vietnam veterans and their dependents desiring such services.

Class action suits

The bill would authorize the attorney general, on behalf of Vietnam veterans in the state who may have been injured by chemical agents while serving in the U.S. armed services, to sue the federal government (and any other party) for the release of individual veterans' medical records or of information concerning exposure to Agent Orange or other chemical agents.

MCL 333.1101 et al.

BACKGROUND INFORMATION

Technically, there is no single chemical named "dioxin". Rather, dioxin refers to a family of chemicals that includes 75 compounds. The most toxic of these, and the one that has caused the most concern (as in the case of Agent Orange) is 2,3,7,8-tetrachlorodibenzo-para-dioxin, or TCDD, a very stable compound. It tends to persist in the environment and to break down very slowly in the body. The dioxins usually are not manufactured on purpose. Instead, they are the unwanted by-products of chemical reactions used to make the herbicides Silvex and 2,4,5-trichlorophenoxyacetic acid (known as 2,4,5-T); chlorophenols, such as the wood preservative pentachlorophenol; and the antibacterial agent hexachlorophene (which was banned in soaps and deodorants in 1972 after it was shown to cause brain damage in baby monkeys). Dioxin also is released into the atmosphere when wastes that contain chlorinated compounds are burned. These wastes can be domestic trash burned in municipal trash incinerators (including so-called "waste-to-energy" incinerators) or chemical refuse burned in chemical waste incinerators.

The TCDD form of dioxin is the most toxic synthetic organic chemical known, and it ranks with naturally occurring substances as the fourth most deadly poison. (Only the toxins made by the bacteria that cause botulism, tetanus, and diphtheria are stronger.) Although extrapolation from laboratory animal studies must be made with caution, one researcher reports that, assuming that humans are as sensitive to dioxin exposure as guinea pigs are, one ounce of TCDD could constitute a lethal dose for more than 675,000 average-sized adults.

Despite its known toxicity, much about dioxin's action on the body remains unknown. The herbicides now associated with Agent Orange (and the contaminant dioxin) were first developed by the end of World War II, but dioxin (TCDD) itself was not identified until 1957. Once dioxin had been synthesized and identified, scientists began to study its effects in laboratory animals. However, the lethal dosage of dioxin for laboratory animals, adjusted for body weight, varies among species by factors as high as 5,000, so most of the information of its effects on people has been taken from industrial accidents and, more recently, agricultural exposures.

The U.S. Air Force estimates that 17.4 million gallons of herbicides used in South Vietnam and Laos between 1962

and 1971, including Agent Orange, contained 368 pounds of dioxin. (Mixtures of different proportions of the herbicides 2,4,5-T and 2,4-D became known as agents orange, blue, pink, white, green, and purple, depending on the colored stripes of their containers.) A spokesperson for the federal Centers for Disease Control has said that significantly higher amounts of Agent Orange were distributed by the armed forces in Southeast Asia and not reported.

FISCAL IMPLICATIONS:

The House Fiscal Agency reports a cost to the state of \$225,000 for fiscal year 1986-87, and \$400,000 per year thereafter until fiscal year 1990-91. Since \$150,000 has already been appropriated in this year's budget, there would be an increase of \$75,000 in cost to the state for this fiscal year and an additional \$250,000 per year thereafter. (5-11-87)

ARGUMENTS:

For:

For far too long Vietnam veterans have suffered the neglect of their government and of American society at large. In addition to the general neglect that veterans faced when they returned home from one of America's most unpopular wars, many who were put physically at risk through their exposure to extremely toxic chemicals in Southeast Asia have also faced resistance or even hostility in their attempts to find out the aftereffects of their chemical exposure.

In a manner reminiscent of the tobacco industry's claims that smoking has never been causally linked to cancer, despite the U.S. Surgeon General's repeated warnings to the public about the health hazards of tobacco use, the federal government has resisted veterans' claims to having been harmed by their exposure to the chemicals used in the war in Southeast Asia by insisting that the only proven link between exposure to one of these chemicals — dioxin — is the severe but non-fatal skin disease known as chloracne, despite the known fact that dioxin is the most deadly synthetic poison known. The federal government has, figuratively speaking, consistently dragged its feet when pressed to act on the Agent Orange issue. And even when it has, reluctantly, acted, the results have been unsatisfactory at best. For example, according to a senior policy analyst for the White House Office of Science and Technology, the studies conducted to date by the federal government on Agent Orange, at a cost to taxpayers of \$155 million, have been inconclusive. Although as recently as 1985 this same analyst continued to insist that states did not have the resources to do the studies that are needed to demonstrate cause and effect between Agent Orange exposure and veterans' health problems, the states have given up waiting on federal action and have been embarking on their own investigations.

Thus, for example, New Jersey's Agent Orange Commission made news last fall when it announced that the levels of dioxin in the blood and fat of exposed veterans it studied were ten times higher than those of two control groups. According to one researcher, the New Jersey findings provided "compelling evidence" that dioxin lingers in the body as long as twenty years after exposure. Related studies on exposure to the other chemical agents in Agent Orange have also been completed recently, and have raised serious cause for concern about exposure to the herbicides contained in Agent Orange. A Kansas study done for the National Institute of Cancer, for example, showed that farmers exposed to one of the most commonly used agricultural and lawn herbicides were eight times more likely to suffer non-Hodgkins lymphoma than the

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general population. Finally, new blood testing technology, enabling researchers to detect dioxin levels at the parts per trillion level, promise that much more sophisticated and informative studies can be carried out today that were impossible even a few years ago.

It is time for Michigan to act. Other states have taken action in the face of federal inaction, and in February of this year a national conference of state Agent Orange programs was held in Boston. Participants at the conference agreed to form a National Association of Agent Orange Programs to coordinate state activities and to share findings. The juxtaposition of the veterans' class action suit against the chemical manufacturers, federal legislation, action by the VA and the Centers for Disease Control, and the important studies and coordinated actions by the states make the formulation of sound public policy possible and timely. The efforts to address the aftermath of exposure to herbicides and dioxin during the Vietnam War have accelerated and Michigan should be an integral part of this process. The knowledge and expertise developed during this course of action will not only benefit the affected veterans and their families, but also the population at large, which has been exposed to many of the same chemicals and compounds. Even though the states alone will not be able to entirely resolve all of the issues surrounding the Agent Orange issue, there still is a lot of room for the states to act and even to take a leadership position vis-a-vis the federal government. Finally, in recent years more and more Vietnam era veterans have been serving in Congress. State action, such as proposed by this bill, can give these veterans the fuel to continue to press for appropriate action on the federal level.