

Soldiers' sickness

Compensation for US veterans

Washington

ACTING under instructions from Congress, the US Veterans Administration (VA) has now spelled out its proposals for regulating compensation claims based on exposure to dioxin-contaminated herbicides and radiation from atomic tests. But VA's proposals, which were required to be based on "sound scientific and medical evidence", are unlikely to end the long-running debate over when cause and effect should be inferred in dealing with such claims.

Nineteen million gallons of dioxin-contaminated herbicides were used during the Vietnam war, but veterans have been largely unsuccessful in claiming compensation from the government for disabilities allegedly resulting from their exposure. Only 20 claims have so far been recognized.

VA's proposed regulations continue its policy of assuming some dioxin exposure for all Vietnam veterans, but are unlikely greatly to increase the number of successful claims. Chloracne is the only disease recognized by VA as likely to result from exposure to the most potent dioxin isomer, 2,3,7,8-TCDD, and then only if symptoms appear within 3 months of military service.

Generally, compensation is paid for all medical conditions which appeared during service, and for some chronic diseases appearing within a year of discharge. In borderline cases, compensation is awarded if there is reasonable doubt. Most claims fall outside these categories, however, as they are based on diseases appearing years later.

VA was requested by Congress to consider specifically how it would deal with claims linking dioxin exposure with soft tissue sarcoma and porphyria cutanea tarda, a liver disorder, but has concluded that neither disease has been convincingly shown to result from dioxin.

Most of the evidence on the human health effects of dioxin comes from studies of industrial exposure and from the Air Force's Ranch Hand study, which found some suggestive but equivocal evidence linking relatively high levels of dioxin exposure in spraying crews to increased incidence of skin cancer, birth defects and neonatal deaths.

Firmer answers should emerge from a \$75 million epidemiological study by the Centers for Disease Control (CDC) of health effects of Vietnam service and dioxin exposure, recently mounted. Some 30,000 veterans will be interviewed by telephone, of whom 10,000 will be given thorough physical examinations at special clinical facilities constructed at Albuquerque, New Mexico. CDC are also carrying out a case control study of those particular cancers suspected of having been caused by dioxin. The results should be available before the end of the decade.

Veterans who participated in above-ground nuclear weapons tests in Nevada

and in the Pacific have been just as unsuccessful in prosecuting compensation claims as the Vietnam veterans. Only 20 cancer cases have been recognized as due to service-related exposure to ionizing radiation. VA's proposed regulations allow possible claims based on leukaemias and bone cancer appearing more than two but less than 30 years after exposure (excluding chronic lymphatic leukaemia), and those based on thyroid, breast, lung, liver and skin cancers occurring more than 10 years after exposure. But, because many of these conditions are relatively common in the general population, few cases are likely to be recognized.

The central argument in radiation-linked claims has always been over the size of the estimated dose. Estimates based on film-badge records, for example, take no account of ingested and inhaled radioactivity, which were probably not negligible in tests where soldiers had to run towards a bomb crater throwing hand grenades. The Defense Nuclear Agency has attempted to fill the gap by making estimates of dose

through these pathways, and these are used in a major study of mortality among atomic test veterans that is to be released later this month by the National Research Council's Medical Follow-up Agency. This study, directed by Seymour Jablon, traces mortality among 50,000 test veterans, roughly one-fifth of the total.

But even this will not be enough to satisfy veterans' organizations and the Congress. Acting again under instructions from Capitol Hill, VA is considering the feasibility of an epidemiological survey of test veterans to determine the incidence of morbidity. VA's deliberations are being overseen by Congress's Office of Technology Assessment (OTA), which will shortly publish a feasibility study on the survey. According to Michael Gough of OTA, the Defense Nuclear Agency's dose estimates are likely to be challenged by veterans' representatives, so the question boils down to by how much the dose estimates must be wrong for detectable excess cancers to occur. Whatever OTA recommends, however, the final decision on the epidemiological survey will rest with VA, which may well decide to proceed with the study in order to silence criticism.

Tim Beardsley

Environment

Japanese move to save forests

Tokyo

A GROUP consisting largely of academics has formed in Japan, the world's first society for the promotion of "Green Civilization", which it is hoped will grow into an international organization. Founder members include Kenichi Fukui, Nobel prize-winner in chemistry, and Mostafa Tolba, secretary-general of the United Nations Environment Program.

The organization has been set up largely because of concern over increasing deforestation and desertification of the Earth through poor agricultural practices and industrial pollution. The move is significant in that Japanese companies have been heavily involved in the destruction of tropical rain forest in South-East Asia. Indeed, the nation was dubbed an "ecological menace" in a report adopted last month by the environment commission of the European Communities for "pillaging natural resources in the most irresponsible way possible, and ravaging tropical rain forests for hard woods".

During Japan's "high-growth" phase, huge tracts of land were stripped of all vegetation in many parts of South-East Asia to provide building materials and pulp for Japan; although direct involvement by Japanese companies in the worst of these practices has now lessened, the amount of tropical forest lost each year has increased and Japan remains the major Asian market. The Green Civilization Society says it intends to try to put the ecological point of view over to industrial companies involv-

ed in logging but it is clearly not about to become a grass roots political pressure group.

Unlike Friends of the Earth, much of whose ideology it appears to share, the Green Civilization Society is to be a more academic body. It is believed that by building an interdisciplinary academic movement — for example of ecologists, biotechnologists and forestry researchers — more rational and less destructive means of forest management could be found that could be incorporated into recommendations to the government. Within Japan itself, forestry is regulated by laws devised in the nineteenth century which were meant to provide a balance between exploitation and regeneration of the forest. These laws are no longer effective but will only be changed, Green Civilization members say, by a joint effort between ecologists, forestry researchers and lawyers.

The society has now around a hundred members, most of them drawn from the universities. At the inaugural meeting last week, Seiji Kaya, former president of the Tokyo University, was elected chairman and Michio Tsutsui, professor of forestry at Tokyo University, vice-chairman. So far, funds are being raised mainly from individuals, with some contributions from industry. One hope is that enough money can be raised to provide a "Green Nobel Prize". The establishment of the new group coincides with the designation of this year as International Forestation Year by the United Nations.

Alun Anderson