

Nuclear test fallout: 1**US Government arraigned***Washington*

A FEDERAL judge in Utah has ruled that fallout from nuclear bomb tests was the "proximate cause" of certain types of cancers developed by nearby residents, and that the government had failed to take proper precautions. Ten plaintiffs, who had developed thyroid cancer, breast cancer or leukaemia, were awarded a total of \$2.7 million in damages. All but one of the ten have since died from their illnesses. The judge ruled that another 14 plaintiffs, who developed other forms of cancer, had not proved a link to the fallout.

Although the decision is certain to be appealed by the government, it has given encouragement to thousands of others who are claiming injury from exposure to low-level radiation generated by the government's nuclear programme. These include 375 other residents of southwestern Utah whose cases have not yet come to trial; uranium miners, who say they were not advised of the risks of radiation exposure; workers at the Nevada Test Site; sheep ranchers in Utah who claim their flocks were killed by fallout; and "atomic veterans" who served at Hiroshima and Nagasaki in Japan and at nuclear test sites.

The judge's decision rested heavily on a finding of negligence on the government's part in failing to carry out a proper monitoring programme that could have measured radiation levels in nearby areas and in failing to warn residents to recommend simple precautions. The plaintiffs lived approximately 100 miles

from the Nevada Test Site during the 1950s and early 1960s when above-ground nuclear testing was carried out. The plaintiffs were able to sue under a special law that allows findings of negligence against the government in certain cases.

In establishing the nuclear tests as the most likely cause of the cancers, the judge accepted the conclusions of several controversial studies that found higher than normal cancer rates in the region. A 1979 study by Dr Joseph Lyon of the University of Utah, cited in the ruling, found nearly twice the incidence of leukaemia in children exposed to the fallout as compared with children who were born long enough before testing began to escape exposure. That study, however, has been strongly criticized, most recently by Dr Charles Land of the National Cancer Institute; Land argues that the rate of the exposed group is actually no higher than the normal rate of Utah, and suggests that the lower rate of the earlier group may be the result of under-reporting of the disease at a time when that remote part of Utah had relatively poor health services.

The three cancers that the judge said were linked to the nuclear tests are the most sensitive to radiation induction. The plaintiffs received radiation doses of, typically, a few rads. According to several independent experts, these doses — particularly in the case of the leukaemias — are enough to attribute a significant though not overwhelming probability of causation to the nuclear tests. **Stephen Budiansky**

Nuclear test fallout: 2**Claim and counter-claim***Canberra*

THE federal Australian Labor Government is under growing pressure from its own backbenches and the Labor premier of South Australia, Mr John Bannon, to furnish more information about alleged secret nuclear tests at Maralinga in 1963, the allegedly unmarked burial of radioactive equipment and the storage of British tactical nuclear weapons on Australian soil during the 1958–61 partial test ban. It is also alleged that human guinea pig experiments were conducted during the seven official tests at Maralinga in 1956–57. Former civilian and ex-military workers on the test sites have risked prosecution under the Official Secrets Act to come forward with accounts — some anonymous, some in part mutually corroborative — that suggest unacknowledged nuclear test operations. These include stories of badly burned military personnel "berserk with pain", civilian workers told to "climb ladders" or to remain unwittingly in areas five miles away, during the tests carried out in the 1950s, and of fireball and mushroom-cloud explosions observed in 1961.

These claims follow the death-bed allegations by a former Royal Air Force technician, Mr John Burke, that he had found four aborigines dead in a bomb crater after one of three previously undisclosed tests in 1963. His claim to have informed the Commonwealth police of the deaths has provoked charges of an official cover-up, since no record has yet surfaced. Mr Burke died on 1 May of stomach cancer which he believed could be directly attributed to the tests.

Claims by the UK Ministry of Defence (MoD) that the three 1963 implosion trigger experiments were one-ton chemical blasts involving polonium may explain the aborigine deaths, but not, perhaps, the extent of the damage reported in the 1961 blasts, in which steel constructions are said to have been oxidized and lead bricks fused at a distance of one mile. The MoD "confirmation" that the 1963 tests were extremely minor sits uncomfortably with the recently-leaked unexpurgated version of the Pearce report on residual contamination at Maralinga, in which 20 kilograms of plutonium is reported to have been spread over four Maralinga sites during 1956–63, resulting in plutonium plumes of above-tolerance radioactivity extending over thousands of hectares.

The anecdotal eyewitness reports are at present unsubstantiated, but South Australian aborigine leaders say they are planning international court action and Mr Bannon has written to Mrs Margaret Thatcher, the British Prime Minister, and Mr Neil Kinnock, the British Opposition leader, for full disclosure. **Jeffrey Sellar**

Government veto for Warsaw rector

THE Polish Ministry of Science, Higher Education and Technology has refused to confirm in office the newly elected rector of Warsaw University, Dr Klemens Szaniawski. This decision runs counter to pledges given through the government press spokesman, Mr Jerzy Urban, that university officers elected in accordance with the 1982 Higher Education Act would be confirmed in office "with a possible exception". The exception Urban referred to, however, was Dr Janusz Onyszkiewicz, the mathematical logician recently elected to the Warsaw University senate who had been the chief press spokesman of Solidarity. Dr Szaniawski, however, was not even a member of Solidarity.

The swift response from the ministry on Dr Szaniawski is surprising. According to the procedure laid down in the 1982 act, the minister had two weeks to reach a decision. In the matter of Dr Onyszkiewicz's election to the senate (a post far less significant for the running of the university), a stalemate has been allowed to develop. The ministry notified its objection to Onyszkiewicz's election (on the grounds of electoral

"improprieties") at the end of March. The outgoing rector, Dr Kazimierz Dobrowolski, said that he was working on his reply and then said he could not act further because he was unclear whether he should convene the old or new senate.

By vetoing the election of the new rector within three days, the ministry has clearly indicated its commitment to the slogan enunciated by Politburo member Tadeusz Porebski, at the plenary meeting of the new Association of Polish Students. The party and state leadership, he said, is "determined to counteract the capture of management posts [in education] by people who do not guarantee the socialist character of the school". Earlier official warnings had said only that the authorities could not tolerate university elections being used to secure a power base for "opposition" elements.

Dr Szaniawski, however, is an essentially moderate figure who, during the Solidarity era, acted as a mediator between the interests of the party and the demands of Solidarity in the drafting of the new higher education and censorship bills. Vera Rich