By JUDITH MILLER

WASHINGTON, Sept. 19 — Twenty-eight years after the United States tested its largest thermonuclear device over the Marshall Islands, four Air Force veterans are challenging the Government's explanation of why the detonation exposed to radioactive fallout more than 236 islanders, 28 American servicemen and the crew members of a Japanese fishing boat.

The veterans, who served on Rongerik atoll in the Marshalls at the time of the atomic test in 1954, said the United States had reason to believe that the 15-megaton blast would contaminate the area. They said the Government failed to evacuate American servicemen and islanders promptly after the test and lied about what adverse health effects they could expect. The force of the blast was equivalent to that of 15 million tons of TNT.

The four plan to file claims against Government agencies and their lawyers are preparing to file a civil suit this week against private companies and laboratories.

The legal actions will charge that the Government and contractors were negligent in carrying out the test and engaged in a "conspiracy to cover up and conceal vital scientific information," the draft complaint states.

Dispute on Cause of Illnesses

The Government does not dispute that the veterans received more than 15 times the radiation that nuclear workers today are permitted to receive in a year, or that those at Rongerik received more radiation than any other group of veterans. What the Government denies is that the servicemen's illnesses are related to that exposure.

At the heart of the disagreement is the Government's explanation that a sudden wind shift led to the unexpected spread of radioactive fallout over a 7,000-mile area.

"The wind had been blowing straight at us for days before the test," said one of the four veterans, Gene O. Curbow, a senior weather technician on Rongerik who took radio-sound weather measurements up to an altitude of 100,000 feet before and after the test. "It was blowing straight at us during the test, and straight at us after it. The wind never shifted."

Officials of the Department of Energy and the Defense Department vigorously denied the assertions that information had been covered up.

"There is no evidence that the Government has been trying to conceal the facts in this case," said Lieut. Col. Dale F. Keller Jr., a spokesman for the Pentagon's Defense Nuclear Agency, which is trying to locate the 220,000 servicemen connected with the atomic testing program and provide free medical tests for them.

Never Considered Guinea Pigs

"These men were never considered guinea pigs," Colonel Keller said. "Every effort was made to protect them before, during and after the test. Radiation monitors and safety programs, reflecting the standards of the time, were in effect. There was never any intentional exposure and every effort was made, our records show, to get them out as quickly as possible."

"The yield of the test was unfortunately greater than expected and the direction of the fallout unexpectedly changed," he continued. "The servicemen's claims are not consistent with the records and lengthy investigations into this episode."

Asked why the four veterans waited so long before challenging the Government's account of the blast, Mr. Curbow replied: "It was a mixture of patriotism and ignorance, I guess."

"We signed statements saying we would not discuss anything that happened on the island," he said, "and for many years I never associated my ailments with the exposure I had received there."

Beside Mr. Curbow, a 49-year-old resident of Roanoke, Va., the veterans planning to file suit are Robert L. Roper, 50, of Pickens, S.C.; Donald L. Baker, 49, of Sacramento, Calif., and Lamont R. Nole, 53, of Wilburton, Okla.

The four veterans say they suffer from a wide variety of ailments including painful skin rashes and cancer, tumors, heart and thyroid conditions. and urinary and bladder disorders that they say are related to the 1954 test. Three of the four say that they have had difficulty fathering children or having healthy offspring.

Two Decades of Debate

Their charges are the latest challenge to the Government's credibility about the 17-year atmospheric atomic testing program. For more than two decades, a debate has raged in which the Government knew at the time about the hazards of radiation, whether warnings to potentially affected individuals were sufficient, and whether the Government dissembled how the tests were conducted and their potential effects.

Last month a Federal District judge in Salt Lake City accused the Government of deliberately concealing evidence and pressuring witnesses in a 1956 lawsuit involving assertions by ranchers in southern Utah that fallout from the testing program killed 4,000 sheep in 1953. The Justice Department denies any wrongdoing.

Last Tuesday, hearings began in a lawsuit in Salt Lake City involving the detonation of more than 100 atomic bombs above the Nevada desert in the mid-1950's. The suit was brought by more than 1,100 current and former residents of the area who say they lost relatives to leukemia and other cancers or are suffering from such diseases themselves as a result of exposure to fallout.

The suit to be filed by Mr. Curbow and other survivors of Rongerik is one of several initiated by veterans who participated in the program to test nuclear weapons in the 1950's.

Test Code-Named Bravo

The Marshall Island test, code-named Bravo, exposed to large doses of radioactive fallout 236 inhabitants of neighboring islands, the 23-man crew of a Japanese fishing boat named the Lucky Dragon, and 28 American servicemen. It also set off a wave of international concern over the dangers of radioactivity, prompted protests by the Japanese Government, years of investigation by the Japanese and American governments, and international...
'54 Atom Test

mands for a ban on atmospheric testing.

Many legal experts said they doubted that the veterans would succeed in the Federal courts. Legal precedents appear to bar former servicemen from suing the Government for compensation for service-related injuries. But the servicemen hope that publicity surrounding their suits will prompt Congress to pass legislation allowing them to receive compensation. Several legislators have sponsored such measures, but Congressional aides say the bills are not likely to win approval in the near future.

About 3,000 people from the Marshall Islands sued the Federal Government in April 1981, asserting that 80 percent of them are suffering harmful health effects, including cancer and thyroid abnormalities, as a result of the testing.

Gordon A. Stempke, one of a group of lawyers representing the Marshall Islanders and the American veterans, said that the Reagan Administration had offered in June to pay $100 million to the fledgling islands government to settle all nuclear-related claims against the United States by island inhabitants.

U.S. Payment Offer Rejected

"We rejected the offer because it was not sufficient," Mr. Stempke said, "but I think it's interesting that the U.S. Government has offered to pay for health and property damage to the Marshallese, but not to American servicemen who endured the same exposure and are equally deserving of compensation."

While the veterans' accounts of what happened on the island March 1, 1954, differ in detail, there is general agreement about their efforts to warn headquarters that the island was receiving large amounts of lethal radiation.

The men recalled that the shock wave of the 6:45 A.M. blast, centered almost 150 miles away, knocked out windows in the cafeteria and the barracks. Soon after the test, they said, huge ashes began falling like giant snowflakes on the island and continued throughout the day, covering the barracks, the cafeteria, and much of the island with a quarter-inch-thick radioactive accumulation.

One of the veterans, Mr. Baker, said that almost immediately, instruments designed to register low levels of radiation went off the charts. In the early afternoon, he sent a top priority message to headquarters, seeking help. At 3 P.M., Mr. Baker said, a second message was sent, again with no response.

Reply Several Hours Later

"When the reply came several hours later," he said, "it said that we should take what precautions we could, but that we couldn't be evacuated then because of the high levels of radiation there."

The men were evacuated on March 2 and extensive decontamination efforts were undertaken at Kwajalein, and later in Honolulu. But the veterans say they were not told at the time how much radiation they had received.

On March 11, 1954, the Atomic Energy Commission issued this statement: "During the course of a routine atomic test in the Marshall Islands, United States personnel and 236 residents were transported from neighboring atolls to Kwajalein Island according to plan as a precautionary measure. These individuals were unexpectedly exposed to some radioactivity. There were no burns. All were reported well."