

# A. E. C. DENIES RAYS KILLED UTAH SHEEP

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Exhaustive Study Undertaken  
After Stockmen Complained  
Losses Were Excessive

SPECIAL TO THE NEW YORK TIMES.

CEDAR CITY, Utah, Jan. 16—

The Atomic Energy Commission closed the book this week on one of the most exhaustive investigations in its history.

The inquiry revolved not around the hydrogen bomb, or why electrons behaved so curiously, but around the The Demise of the Utah Sheep.

Last May, stockmen in southern Utah complained to the commission that an inordinately large number of their ewes and lambs had been dying.

The commission had just staged a series of atomic tests at its Nevada proving ground, near the Utah line, including the biggest detonation ever set off on this continent. The suspicion was that radioactivity from the explosions had killed the sheep.

Upwards of 5,000 sheep had grazed in the area, the closest flocks about forty miles from the test site, and upwards of 1,000 had come to untimely ends.

The episode presented the A. E. C. with one of the most ticklish situations since it began its continental tests.

The agency was certain before it started the tests that they could involve no hazard to anybody or anything off the test reservation. Something like \$10,000,000 has been invested in permanent facilities at the test site, and the commission's development program is geared to its operation.

Yet if a thousand sheep had been killed by radiation, the inescapable inference was that it might have been a thousand human beings.

Therefore the commission spared no effort to trace any connection between the explosions and the mortality of the sheep. The quest—which, to obviate any suspense, had a negative outcome—involved atomic installations from Washington, D. C., to Washington state, and took more than six months.

On June 5 and 6 a joint team of six medical experts from the A. E. C. and the United States Health Service went to the Cedar City area, and with Utah officials and representatives of the stockmen performed autopsies on some of the sheep and took blood, bone and tissue specimens.

A week later, a health service doctor, with doctors from the Utah Bureau of Animal Husbandry and the University of Utah Radiobiology Laboratory procured additional specimens from dead, sick and well sheep, and took testimony from stockmen.

## Burns Are Investigated

Three days later the inquiry was put on a national basis, under the coordination of the commission's Division of Biology and Medicine in Washington, D. C.

The following day, Dr. Paul B. Pearson, A. E. C. medical expert, with division associates and experts from both the Utah Agricultural College and the University of Tennessee, which collaborates with the commission's Oak Ridge, Tenn., branch, went to Cedar City and examined more sheep and collected water, soil and plant samples from the grazing area.

Throughout the rest of June and July, all the investigators pursued tests at their respective laboratories. On Aug. 3 and 4, twenty of the investigating personnel met at Salt Lake City to exchange notes.

A week later, representatives of the commission, the health service, the Bureau of Animal Industry, the Utah State Health Department and the Utah State Agricultural College met with sheepmen in Cedar City to discuss their research and get more data.

Some burns on the sheep resembled atomic beta-ray burns. The commission's Los Alamos, N. M., scientific laboratory, the center of its bomb development, was set to work exposing test sheep to beta rays to see if the sores matched. They did not.

Meanwhile, on the chance that the sheep might have swallowed radioactive iodine, the A. E. C.'s Hanford, Wash., laboratories were set to work testing sheep's thyroid glands (where iodine lodges). It was established that the range sheep could not have gotten more than one-fortieth of the minimum injurious dose.

On Oct. 27, the principal investigating personnel met once more, at Los Alamos, compared notes, and prepared a final report on the inquiry.

## Wider Studies Planned

It was presented to the sheepmen at Cedar City Wednesday. It recapitulated the studies in exhaustive detail, concluding that no evidence could be found that enough radioactive material of any sort had landed on the grazing area to cause the sores and deaths among the sheep.

Dr. Pearson said funds were being made available to the Utah State Agricultural College and the University of Nevada for "follow-up" studies.

"If and when another atomic detonation is scheduled in Nevada, we will have our teams on the ground to immediately begin an extensive study of the possible effects on vegetation and livestock," Dr. Pearson pledged.

The investigators did not go into the veterinary side of the mystery and suggest what might have killed the sheep.

In view of the fact that there were similar deaths later in the year among sheep grazing entirely outside the range of atomic-blast effects, there was unofficial speculation that the mortality might have resulted from a combination of other circumstances.

These could be drought, plus poor grazing, which might lead sheep to nibble unaccustomed vegetation, among which there are known to be poisonous plants.

The finding was not much consolation to the sheepmen, but by the same token implied reassurance to the population at large—and to the A. E. C.

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