

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 investi-
gations in its history.

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

Last May, stockmen in south-
ern Utah complained to the com-
mission 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 big-
gest detonation ever set off on
this continent. The suspicion was
that radioactivity from the ex-
plosions 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 tick-
lish situations since it began its
continental tests.

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

Yet if a thousand sheep had
been killed by radiation, the in-
escapable inference was that it
might have been a thousand hu-
man beings.

Therefore the commission
spared no effort to trace any con-
nection 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 Wash-
ington 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 offi-
cials 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 Hus-
bandry and the University of
Utah Radiobiology Laboratory
procured additional specimens
from dead, sick and well sheep,
and took testimony from stock-
men.

Burns Are Investigated

Three days later the inquiry
was put on a national basis, un-
der the coordination of the com-
mission'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 ex-
perts from both the Utah Agri-
cultural College and the Univer-
sity of Tennessee, which collabo-
rates 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 graz-
ing 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 per-
sonnel met at Salt Lake City to
exchange notes.

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

Some burns on the sheep re-
sembled 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 in-
vestigating personnel met once
more, at Los Alamos, compared
notes, and prepared a final re-
port on the inquiry.

Wider Studies Planned

It was presented to the sheep-
men 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 graz-
ing 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 Ne-
vada, we will have our teams on
the ground to immediately begin
an extensive study of the possible
effects on vegetation and live-
stock," 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 entire-
ly outside the range of atomic-
blast effects, there was unofficial
speculation that the mortality
might have resulted from a com-
bination 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 con-
solation to the sheepmen, but by
the same token implied reassur-
ance to the population at large—
and to the A. E. C.

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