

# BARTLETT: 'PUBLIC MISLED'

## Senator Says Scientist Misled on Radiation, Arctic Levels Double

Senator E. L. (Bob) Bartlett, in a lengthy speech in the senate, has indicated that the problem of fallout in the Arctic is much bigger than most people expect, that scientists with the Atomic Energy Commission are misleading the public about it, and that not nearly enough is being done by the government to alleviate it.

In the past year alone, Bartlett said radiation levels in Eskimos of the Arctic had doubled although A.E.C. scientists had predicted the levels would drop.

Bartlett particularly took to task Dr. Frank Hungate, a scientist under contract with the A.E.C. employed at the Hanford Laboratories, Richland, Washington.

Bartlett said Dr. Hungate, as principal speaker of the Alaska Science Conference on September 8, last year, and in an interview after the speech, misled the public by inaccurate presentation of facts.

### 450 Attended

About 450 scientists from Alaska and the other states attended the conference held at the University of Alaska.

Residents of the Arctic are receiving doses of radioactivity at or above so-called permissible levels set by the Federal Radiation Council, National Council on Radiation Protection, and the International Commission on Radiological Protection, he emphasized.

He said strontium 90 ingestion rates at Anaktuvuk Pass Eskimos are at a level calling for "surveillance and routine control" and that he is not satisfied this surveillance and control is being undertaken.

### Many Denials

Bartlett indicated time after time Atomic Energy Commission officials had denied non-government scientists that acceptable levels of radioactivity had been reached.

As an example, he said A.E.C. official S. G. English in a letter to him dated May 6, 1963 explained that an Eskimo would have to eat "an average of 58 pounds of caribou meat per day per person for a lifetime at these levels (those estimated by non-government scientists)

lists)" if he were to obtain a strontium 90-ingestion about range one of the Federal Radiation Council."

Bartlett then pointed out in recent testimony by A.E.C. officials themselves this level had been reached in the summer of 1964.

"It is clear that either radiation levels have jumped significantly or else that Eskimos are eating a good deal more caribou meat than they used to," Bartlett said.

(Continued on Page 2)

### Bartlett to Keynote Polar Bear Conference

Senator E. L. (Bob) Bartlett will deliver the keynote address at the international conference on polar bear to be held at the University of Alaska September 6-11.

Representatives of Canada, Denmark, Norway, the Soviet Union and the United States will attend.

Sen. Bartlett will speak on the need of an international and coordinated effort to determine the status of polar bear populations.

In addition to official delegates, representatives of private scientific organizations have been invited as observers.

### GRUENING CONTINUES POPULATION CONTROL SENATE HEARINGS

Hearings which Senator Ernest Gruening is conducting as chairman of a subcommittee of the Government Operations Committee into the problems of population control continued last week with the appearance of four witnesses.

They included Chester Bowles, U.S. ambassador to India; John D. Rockefeller III, chairman of the board of the Population Council,

# Bartlett Says Scientist Misled on Radiation . . .

(Continued from Page 1)

## Long Half Life

Bartlett went on to point out that the half life of strontium 90 is 11 years, that it is absorbed eight times faster by children than by adults, and that high levels of strontium may cause bone cancer and leukemia.

"It is not to be taken lightly," he warned.

Another radionuclide, cesium 137, which has a relatively brief half life of about 100 days.

"In 1963, cesium 137 levels were found to be 50 per cent greater than the levels of 1962. In 1964, the levels found were twice those of 1963. In the summer of 1964, the average level found in Anaktuvuk Eskimos was 13,300 nanocuries. The maximum individual cesium 137 body burden found was 3,000 nanocuries."

## Not Enough Info

Bartlett said that officials themselves admit they do not have enough information to predict accurately future levels, that past predictions of fallout levels in the Arctic have been wildly inaccurate and greatly underestimated, and that a substantial increase in research to answer critical questions was urgently needed.

## Dual Roles An Error

Bartlett emphasized the error in assigning both the development protection responsibilities to a single

agency, pointing out the possibility that agencies hesitate to admit the extent of our ignorance on radiation hazards and hesitate to undertake a full scale program of research for fear of raising doubts in the minds of the people and their elected representatives.

In part, Senator Bartlett's speech read:

"Unfortunately, the very agencies in charge of the development of our nuclear capacity are also, in large part, in charge of research on atomic fallout.

## Hesitate to Admit

"It has been reported that these agencies hesitate to admit the extent of our ignorance on radiation hazards or to undertake a full scale program of research for fear of raising doubts in the minds of the people and their elected representatives. Whether this hesitancy exists, I cannot say.

"If it does, it is certainly understandable. The very possibility of its existence, however, points out the error in assigning both development and protection responsibilities to a single agency.

## Public Confused

"It is difficult for the agency to avoid ambivalence and this is why, perhaps, the information available to the public is often both confusing and apparently contradictory."

"This sort of thing is not helpful. It is not helpful to democracy and it adds to the burdens of the non-scientist public officials. The need for research in the problems of radiation presents scientists with a responsibility to their fellow men which they have not as yet accepted.

## Gloss Over Attempt

"An example of this tendency to gloss is illustrated by a speech and an interview given by Dr. Frank Hungate of the Hanford Laboratories. Speaking in Fairbanks at the 15th Annual Alaska Science Conference on September 8, 1964, Dr. Hungate made the following points which cry out for rebuttal:

"Or. Hungate said that the strontium and cesium contamination levels were 'insignificant.' He said this even though at the moment he was speaking, the average population contamination level at Anaktuvuk exceeded the so-called acceptable limit for population groups as set forth by the Federal Radiation Council.

## In Long Run

He said this even though Dr. H. M. Parker, manager of the laboratories which employ Dr. Hungate, had said on August 23, 1963, in discussing the problem of the increasing contamination of the food chain, "This is not to say that in the long run it would not be dangerous . . . and if I were a resident there, I'd begin to look around to see how reasonable it would be to substitute some other kind of food."

"Since this statement of Dr. Parker's of course, contamination levels have doubled. Little good is served by calling these levels 'insignificant.'

## Don't Worry

"Dr. Hungate said that Alaska levels were no cause for worry because people in other parts of the world for generations have received radiation doses in excess of those in the Arctic from natural background sources. He mentioned specifically Sweden, India and Brazil. Background levels in these countries are high.

## Meaningful Study?

"The thorium-bearing sands of Kerala, India, do provide background radiation levels 15 times greater than those in other parts of India. And people living in Denver do receive 1½ times as much

(Continued on Page 6)

# Public Misled Regarding Arctic Radiation . . .

(Continued from Page 2)

background radiation as do those living in San Francisco.

"It would be useful if some meaningful study with full environmental controls could be made to determine whether those living in the relatively highly radiated areas are more prone to leukemia, cancer or genetic damage as a result of their exposure.

## Reassure With Irrelevancy

"Environmental factors in San Francisco and Denver are very different. There are so many many things different that no reputable scientist can state whether high Denver background radiation levels are less or more dangerous than lower San Francisco levels.

"Dr. Hungate no doubt is aware of this. Why then did he attempt to reassure with irrelevancy?

"Dr. Hungate claimed that a speech of mine to the Senate last year exaggerated in saying that the cesium contamination levels of citizens of Anaktuvuk Pass were 300 times those of the average American.

"Had he read my statement in full, he would have seen that what I said was, 'In 1962 the average body burden of the average American was estimated at 3.9 nanocuries. The Anaktuvuk average today stands at 300 times this level.

"I would have used the 1964 figure for the average American body burden had it been readily available to me, but it was not. My statement as it stands is accurate.

## Request New Standards

Dr. Hungate stated that the Federal Radiation Council's so-called radiation protection guide is 'meaningless' and that 'new acceptable levels should be set.' This may or may not be so.

"The radiation protection guides, it is admitted by all, were set conservatively and, I had believed, almost all agreed, that conservatism in this regard was a wise policy.

"Repeatedly the Federal Radiation Council has stated the nature of radiation hazards requires, in the formulation of recommendations for radiation protection, a correlation between the possible risks associated with a particular radiation exposure and reasons for accepting exposure.

## Careful Consideration

"The Federal Radiation Council, in determining levels of acceptability, has always made clear that the radiation protection guide is 'the radiation dose which should not be exceeded without careful consideration of the reasons for doing so; every effort should be made to encourage the maintenance of radiation doses as far below this guide as practicable.

"The Council has never suggested that its radiation acceptability levels should be used as an absolute basis for determining whether counter measures are called for in a particular contamination situation.

"The guide, based upon a balancing of all factors, social, political and scientific, is to be used as an indication of situations that need careful surveillance and evaluation.

They may not be very good—as many have said. They may be much too vaguely and generally worded to be of much use.

"They are not, however, 'meaningless' as Dr. Hungate claimed and they should not be disregarded merely because acceptance levels have been exceeded.

## Throws Guide Away

"Having thrown away the radiation protection guide, Dr. Hungate, in his evaluation of the contamination levels of the citizens of the inland Arctic, especially the village of Anaktuvuk Pass, attempts to use instead the maximum permissible levels which have been established for workers employed in radiation laboratories.

"If these values are applied, the contamination levels of the Anaktuvuk population group do not sound so high. Unfortunately, these

values are not really applicable.

"Radiation workers are carefully monitored on a day by day, hour by hour basis. They are checked as they go in and they are checked as they come out.

"If their dose level approaches the yearly limit, they must seek employment elsewhere.

## Sketchy Efforts

"Obviously, this is far different from the situation at Anaktuvuk and elsewhere in Arctic Alaska where only sketchy efforts are made at surveillance and where no one knows for how long the exposure will continue or to what heights exposure levels will climb.

"Dr. Hungate estimates that the natives of Anaktuvuk will receive two to three rad from cesium 137 exposure over the next 30 years. This would, of course, be in addition to strontium 90 exposure as well as to normal background radiation to which we are all exposed.

## Foolish Assumptions

"Hungate is assuming there will be no further atomic testing, no further filling of the skies with radioactive fallout and that present contamination levels will not continue to rise in the years ahead as they have in the years past.

"Not one of these assumptions is assured and it would be a foolish man indeed who would base his calculations upon them.

"Even with such assumptions, in order to obtain the minimal figure of two or three rad it is necessary to calculate the biological half life of cesium on lichens as 10 years. This is precisely one-third of the figure usually taken.

## No One Knows

"No one really knows whether a figure of 30 years is more accurate than 10 for it is only this year that, as Dr. Hanson said in his recent testimony, work was begun on evaluating the retention of strontium and cesium radioisotopes by lichen communities because of the importance of lichens in providing a reservoir of fall out radionuclides at the base of the food web. These studies are continuing at the present time.

"Dr. Hungate was quoted in the newspapers as saying that he 'did not consider strontium 90' as a significant factor to Eskimos since this fallout substance is present in meat only in barely detectable amounts.

Dr. Hanson's testimony before the Joint Atomic Energy Committee states that levels of strontium 90 ingestion were well out of range one, well into range two last summer.

## Significant Increase

"His estimate, based on the most scanty figures, is that the average strontium 90 rate went from 13 picocuries per day per adult in 1963 to 24 picocuries per day per adult in 1964.

"Whatever this is it is surely not insignificant.

"Dr. Hungate was further quoted as saying that radiation in Alaska is inconsequential because fallout is five-fold less than in the 48 contiguous states.

"As we have seen, however, it is the contamination trapped in the food chain rather than the overall amount of fallout which causes a problem in Alaska. To my knowledge, no one has ever claimed that the Arctic receives more fallout than elsewhere.

It is just that it does a better job of keeping what it gets.

## Lack of Concern

"In order to show his lack of concern with the Alaska situation, Dr. Hungate stated publicly that he and his fellow scientists at Hanford had considered ordering large amounts of caribou meat with which to feed their children and their families.

## Patently Absurd

"This is patently absurd. If his children would like to make over 70 percent of their diet caribou meat for over 30 years, their experience might have some relevance to

our problem in Alaska. Ordering a carload of caribou meat as a publicity gimmick is not going to solve anything at all and it is distressing to have a reputable scientist suggest such a thing.

## Distressing, Unlawful

"It is not only distressing, it is perhaps contrary to law. It is illegal, under Alaska State law, to 'transport, sell, offer to sell, purchase or offer to purchase' caribou except according to state regulation. Fish and game officials might well wish to keep watch on Dr. Hungate's activities.

"Lastly and incredibly, this scientist is quoted as saying repeatedly, 'that evidence had not been shown that radiation caused bad effects,' and 'The scientist said they had fed animals large amounts of radiation for the last three years and had noticed an increased ability at survival.

"He indicated the radiation had helped cause mutations and that mutations had been necessary in the evolution of man."

"This defies comment.

## Exposure Harmful

"Many, a good laboratory mouse and monkey have endured the suffering imposed by leukemia and cancer; many a fruit fly and mouse have given birth to monstrous mutations in the process of proving to scientists and non-scientists alike that radiation is not good for you.

"Exposure to radiation is harmful. Exposure to more radiation is more harmful.

"It is absurd to imply otherwise.

"In a letter dated January 11, 1965, Paul Tompkins, Executive Director of the Federal Radiation Council explaining the basis on which our government formulated its guides made clear that our policy is predicated upon the harmfulness of radiation exposure.

"The guides, he said, took into account available scientific estimates of the risks of exposure.

"Tompkins gave as an example of this, 'The United Nations report expresses its estimate of the radiation risk associated with exposure of the thyroid in the dose range of 100 to 300 rads as about one case (of cancer) per year per rad per million exposed individuals averaged over a period of approximately 16 years following irradiation.

"Cancer is not good for you; nor is radiation exposure.

## Insisted on Revising

"The Alaska speech which I have referred to was written by Dr. Hungate himself. The article to which I have referred was based on a lengthy interview. It was written by a Fairbanks reporter.

"Dr. Hungate insisted that he be allowed to edit the reporter's copy before it went to press.

"And edit it he did, extensively. Although I have read both the original and printed versions of the story, I have limited my comments to the less extreme printed version.

## Others Mislead Too

"Dr. Hungate, alas, is not alone in misleading the public and public officials. Other scientists have done the same.

"Ultimately, the problems of fallout and what to do about them become a matter of public policy. Any sort of nuclear reactor or nuclear weapons test involves a certain degree of risk.

"The benefits resulting from the reactor of the test must be weighed against the genetic and somatic risks resulting from radiation exposure. Determining what these risks are and determining where the proper balance should be are immensely difficult and subtle problems."

"Ultimately, it is the government and the federal officials who head our government who must make these determinations.

"To do so responsibly they need the best judgment and advice and the most honest presentation of the facts and evidence that scientists and science can give. Anything less is unacceptable."