

Energy Insider by Marjorie Mazel Hecht

Watkins abets Hanford radiation scare

The move to shut down the defense industry is using a radiation scare that has no scientific merit.

Energy Secretary Adm. James Watkins angered many in the scientific community when he talked July 11 about safety at the Department of Energy's Hanford, Washington site, which has produced plutonium for defense since World War II. Watkins warned that an independent study would be made public the next day reporting that Hanford's releases of radioactive iodine in the 1940s could have given area residents doses as high as 3,000 rads to their thyroids.

"The rhetoric [about safety] is hiding the real agenda, which is to shut down the defense industry of the United States," one Hanford official angrily commented. "We can find no safer industry in the nation than we have at Hanford, and this is based on a review of safety records of the National Safety Council."

Watkins dropped a bombshell about the Hanford Environmental Dose Reconstruction Project: "The implications of the report are serious in that the anticipated doses that will come out of this Phase I report are high, and by high I mean significantly high—3,000 rads, thousands of rads," he said. He suggested that large doses could have caused cancer or thyroid problems for those living near Hanford.

Headlines the next day were predictably hysterical, and this set the tone for coverage of the actual results of the study announced by its technical steering panel July 12. In contrast to what Watkins said, the panel's report of Phase I of its multi-year study emphasizes that 95% of the study population (the 270,000 residents in the 10 counties nearest Hanford) received

a dose less than 33 rad, about 90% of the study population may have received a radiation dose to the thyroid of 15 rads or less, and about 50% received doses below 1.7 rads.

The report does not address either the 5% who received lower than average doses or the 5% who received higher than average doses—because of "much uncertainty associated with high-end doses." On the high end, said panel chairman Dr. John Till, "some infants may have received a radiation dose as high as 2,900 rads," but only a small number of people could have been exposed to such doses, and the "probability that any of them actually received such a dose is low."

Why did Watkins choose to mislead the public? "No one is quite sure where Secretary Watkins got that 3,000 rad dose," said Mary Lou Blazek, vice chair of the panel. A DoE press spokesman similarly told this reporter that the secretary "had not seen the panel's report before his press conference," that his figure was "based on no real knowledge," and that it was simply "the high end of speculation."

Radioactive iodine, iodine-131, in the amount of 340,000 curies was released into the air at Hanford from 1944 to 1947 during the extraction of plutonium for weapons. Hanford, one of the main sites of the Manhattan Project, had two plants to extract plutonium. As one Hanford engineer put it, the nation was at war and we could not tell the population how much and where it was being released, because it would have been very easy for the Russians and the Germans to calculate how many weapons the United States

was building.

Let's put the Hanford data into perspective, said Dr. Dixy Lee Ray, the former governor of Washington who chaired the Atomic Energy Commission from 1973 to 1975. "The first thing to remember is that releases simply mean that—what's put into the atmosphere—and that's a very different thing from a person's exposure or a dose that a person may receive. . . .

"The second thing is that radioactive iodine . . . has a half-life of eight and one-half days; much of the information I have seen lets the reader believe that the radioactivity is still there." In other words, within a few months it decays into a harmless material.

"The third thing," Ray said, "is that radioactive iodine is very specific [to the thyroid]. . . . Radioactive iodine cannot give a person cancer of the lung, the breast, the pancreas, the gut—anything else."

Although there are at present no data for thyroid disease, there is no record of excessive numbers of thyroid cancers in the Hanford area. The mortality data for the area are also interesting: Cancer mortality is 15% lower in the area than the national average, and the overall mortality rate for the area is 20% lower than the national average.

The Hanford Environmental Dose Reconstruction Project began in 1988 to estimate the radiation doses that the public might have received from the release of iodine-131 into the air during 1944-1947, and the release of other radioactive materials into the Columbia River from 1964 through 1966. The releases of radioactive materials other than iodine in the 1960s, the panel said, were very small, on average accounting for less than 15% of the dose an average American gets each year from naturally occurring radiation.