

Scientist finds Oregon ads misleading

■ **Editor's note:** Recently, the Oregon Health Division of the Oregon Department of Human Resources has run a series of full-page anti-Hanford advertisements in Oregon newspapers. In this article, a Hanford scientist questions the purpose.

By **MIKE FOX** *TC 4 8 May 1994*
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The recent series of full-page Hanford advertisements was remarkable. They were well-crafted, plausible, believable, appealing. They were also dreadfully misleading, especially since they were funded, apparently, by the Oregon Health Division. To the extent that \$170,000 of taxpayer dollars were used in a period of tight money to pay for these, we'd expect a higher quality discussion of the issues. The Health Division failed to provide a quality discussion.

There certainly were releases from Hanford, especially of radioactive iodine, but it's a long way from releases to demonstrated harm. The same radioactive iodine released at Hanford in the 1940s is exactly the same radioactive iodine used today to save lives in nuclear medicine, without observable harm.

One advertisement cited a woman living 120 miles away in Spokane who got thyroid cancer. Interestingly, Spokane is known to have high levels of radon, a naturally occurring radioactive gas, similar to helium. Radon is in every breath Spokane residents breathe. Most of us breathe significantly less radon. But no mention was made in the advertisement that the average Spokane resident gets large radiation doses from such natural sources each and every year. And no, nothing exceptional is showing up in Spokane cancer data.

The advertisements ignored major amounts of perspective in the sources of natural radiation around us. In Oregon, about 2.5 million curies of naturally occurring radon are released from soils each year. In Washington, the figure is 4 million curies.

Specifically, radon is a decay product of other naturally occurring radioactive ma-

terials in the soil, uranium and thorium. These are part of our natural environment and excellent radiation sources for such comparisons. By contrast, the large Hanford releases occurred nearly 50 years ago. The natural releases of radon occur every day and will continue to do so forever.

The message implied about the Spokane woman was Hanford caused her thyroid cancer. Maybe, but maybe not. No mention is made that there are at least 12,000 new thyroid cancers diagnosed each year in the United States. The areas in the United States with the highest thyroid cancer mortality rates are not in Washington at all. They range from Yuma, Ariz., to New York City, to Cincinnati, to El Paso. The causes are unknown. That someone living 120 miles away from Hanford got thyroid cancer is tragic, but one should expect to find dozens of thyroid cancers out of the 12,000 new cases per year to be within 120 miles of something. Causality is never established.

A review of the cancer data of the National Cancer Institute also indicates no excesses of thyroid mortality in the area. In Franklin County, home of the downwinders, the NCI data show there was only one thyroid cancer death between 1950 and 1980, a male in the 1960s. The Washington state Cancer Registry indicates the thyroid cancer incidence in Franklin and Benton counties is 20 percent below the Washington average. Yet another recent study by the NCI around nuclear facilities, including Hanford, also indicated no excesses of leukemia, or any other form of cancer. Finally, a continuing decadeslong study of the Hanford worker population shows overall cancer mortality rates to be well below the national averages, including the rates of cancer normally associated with radiation. To ignore the huge body of regional cancer data is bewildering. For a government agency to ignore it is a disservice.

Another ad described a Yakima family, (80 miles against the prevailing winds), which had four cancers among five family members. Did Hanford cause these? Maybe, but maybe not. Significantly, the advertisement did not tell us the types of can-

FUNNY,
THEY DON'T LOOK LIKE
GUINEA PIGS.

From Washington University, which got paid \$100,000 by the Hanford...
during the time of the major release of radioactive iodine in 1944.

December 2, 1949. The Green Run -- the largest single known release of radiation from the Hanford Nuclear Weapons Plant. A deliberate and calculated experiment. About 4000 curies of radioactive iodine-131 were released during the Green Run, 900 times more than in the Three Mile Island accident. And it was kept classified until 1980. Today, then, under pressure from the public, did the U.S. Government of Energy release secret documents about the radioactive releases. But the Green Run was not the only release of radioactive iodine. For decades, the Hanford nuclear weapon plant sent radioactivity into the region's air, water and soil. In some estimates that over 100 million curies may have been exposed to radiation from Hanford. If you lived in the shaded area in the map between 1944 and 1962, you may have been exposed too. This does not mean that radiation harmed the health of everyone living in the area. It does mean that you may be more at risk for health problems related to radiation than people who did not live in the region. Today, thousands of people have questions about whether their health was affected by Hanford's radiation releases. Unfortunately, knowledge about the health effects from exposure to radiation is limited. And science can provide few hard answers. That's why the Hanford Health Information Network exists -- to do it is to provide you with as much information as possible about the health effects of radiation from Hanford. We will offer support to help you deal with the uncertainties, and put you in touch with others who share your concerns. Please give us a call.

If you're concerned about the health effects of radiation from Hanford, call 1-800-248-4446.

One in a series of Hanford-related ads published by the Oregon Health Division.

cers involved. Some cancers may be caused by radiation (at high doses as in the Japanese bomb victims), many are not.

Consider the following. In a U.S. population of 250 million there are millions of families of five members each. On average one of the five members will die of cancer. Rules of statistics do not allocate exactly one cancer per family, regrettably. Statistics tell us 38 percent of the families will have no cancer. Another 38 percent will have exactly one cancer. About 1.5 percent or about 800,000 families can be expected to have four cancers in the five members. It's improbable, it's tragic, but it certainly happens. Smoking, poor eating habits and other personal abuses can increase the probabilities even more. In the case of the Yaki-

ma family, one should also consider genetic predispositions to cancer.

Another of the ads suggests evidence of radiation releases was concealed until 1986. As far as concealing the evidence of Hanford releases until 1986, this isn't quite true, either.

First, we should understand, as any Oregon State nuclear engineering student understands, that by knowing the amount of radioactivity released, one can back calculate the number of weapons being produced.

Therefore, the amounts released were secret. Congress (not the AEC or Hanford workers) demanded it. The Rosenbergs were executed for disclosing atomic secrets. Hanford critics are having both sides of the argument. They condemn the secrecy, knowing to do otherwise was treasonous.

It's true a great deal of information was not distributed to the general public, but documents were distributed widely, beginning in the mid-1950s, to many health officials. Some of the recipients included the U.S. Public Health Service, the surgeon general, many universities, as well as the Public Health Service office in Portland, Oregon state Board of Health, Washington state Department of Health, Seattle, Pollution Control Commission, Olympia. The people of Oregon should ask their state leadership to provide full disclosure of all of this publicly available information.

People should expect their governments to clarify and inform, not to mislead and frighten with catchy ads.

When cause and effect relationships are established by angry mobs, government officials or parasitic lawyers, we enter the dreadful world of witch hunts. The world of sound science and public policy is left far behind. Everyone ultimately loses in such a regime, including the practitioners.

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