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"NOBODY EVER DIES OF RADIATION POISONING. The vital statistics of the U.S. only allow you to die of one of 73 causes. Radiation poisoning isn't one of them. The computer won't take it. When the government doesn't want things out it suppresses them with vigor. They put enough money into lawsuits and cover-ups so they always win. IT'S THEM AGAINST US."

Billings Brown, originally from Seattle, moved to northern Utah in 1952 where he opened the Department of Chemical Engineering at Brigham Young University in Provo. After six years there he went on sabbatical and never came back, joining the "Cold War military effort" instead. "Missiles were my line, working on rockets and rocket fuels at Hercules [Missile Motors plant in Magna, Utah]. I went on to Boeing, then in 1968 I went to the Pentagon for a couple of years, working in the Institute for Events Analysis." As a scientist, Billings Brown became concerned about the integrity of government-sponsored cancer studies administered through the University of Utah Medical Center that considered northern Utah to be an area of low fallout, and thus used it as a "control" group against which to compare rates of cancer in southern Utah. This juggling of statistics would make it appear that there is less cancer downwind. His many experiences with radiation at home in Utah during the atmospheric testing era, in his efforts to clean up the enormous Vitro uranium tailings site in Salt Lake City, and as a technician at Hanford Nuclear Reservation and Lawrence Livermore Laboratory, have convinced him that the government will always "put enough money into lawsuits and cover-ups so they always win. It's them against us."

One of the courses I taught at BYU was nuclear engineering, SO I did have some equipment. A geiger counter is quite inefficient, but it does work. In March 1955 I wrote to the *Los Angeles Times* and complained that they only set off tests when the wind wasn't blowing towards California. It went toward Salt Lake City. Dust settled over northern Utah like the old-timers had never seen before. With that clue I took the geiger counter and went outside. We counted the dust settling on cars, on the windows, and so forth, and found it very radioactive. Very hot.

In fact, my estimate was that it was above the tolerance level for children, though not for adults. My basis for that *LA Times* letter was seeing all that dust everywhere, and knowing my four kids were out playing in it. I called home, had them brought into the house, bathed and their hair washed. I took the geiger counter home and measured their clothes. They were hot. What I want to point out was that fallout wasn't just in southern Utah. It was just as severe in northern Utah.

Dr. Joseph "Lynn" Lyon, Chief of the Division of Epidemiology of the Department of Family and Community Medical at the University of Utah and codirector of the Utah Cancer Registry, headed cancer studies of southern Utah residents that, to his surprise, showed that there was a threefold increase in leukemia. Press attempts to interview him after a second study was released were unsuccessful; he said that the Department of Energy had placed him under a gag order.

I didn't know Lyon, only his impudence. If Lyon hadn't gotten into the act and spoiled the statistics, I think somebody could have proved that his division between northern and southern Utah fallout was wrong. I did talk to one of his graduate students [a research assistant] until he ordered that she not talk to me anymore, so we did get some facts before she clammed up. The problem was he drew a line through the state and used northern Utah as a control group, but that's wrong because the north had plenty of exposure. He should have used someplace that wasn't exposed [to radiation]. I did a sampling on one day, three days after a test. I had the figures on the geiger counter written down and sent them to the *LA Times* [which, in the March 24, 1955, issue, described atomic tests as "nuclear puffballs"], who forwarded my letter to the AEC. The AEC wrote back that they were genuinely interested in my figures, which I then sent them. They sent back rather a nasty letter, as the government is prone to do, saying it [the radiation] was 18,000 times below the maximum permissible concentration, and you'd have to inhale or eat 70 tons of this dust to get up to the permissible burden. This was absolutely false, wrong, misleading, and I don't know where they got their figures, but I just let the matter drop. The AEC letter said, "we appreciate your personal concerns, but would you please try to separate them from the facts." I was 35 then, relatively young and innocent. Nowadays 35-year-olds are more active, but then I just saluted and let it drop.

As far as I know, only myself and Bob Pendleton [Utah's first full-time director of the Department of Radiological Health and a persistent critic of the AEC whom Dr. Lyon characterized as "very noisy"] made measurements in northern Utah at that time, and he made far more than I did. He went to the mountains and measured radioactivity in deer and brown trout. He said, for example, he would not eat those trout because they were too hot. I discussed the results of my spot checks with Pendleton off and on, and we were two crying in the dark. He had much more data than I did. He went after the thing with vigor, I did not. He carried the ball in the fallout, but he didn't get anywhere. [In 1963, after publication of his radioiodine study was held up by the AEC, Dr. Pendleton wrote, "I wonder if those in power in the Atomic Energy Commission realize that it is one thing to err and admit it, but that it doubles the guilt when you err, refuse to publish it and then deliberately go contrary to all the democratic principles by suppressing release of information which is vital to the nation."][2]

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[1] Philip Fradkin, *Fallout: An American Nuclear Tragedy* (Tucson: University of Arizona Press, 1989), p. 44.

[2] *Ibid.*, p. 217.

Snow was collected on March 2, 1955. You might want to zero in on that date. [This was the day after shot Tesla, 7 kilotons.] There was a second test a couple of days later. There was a dust storm on March 7 [the date of shot Turk, 43 kilotons, almost three times the size of the Hiroshima bomb]. There was a previous dust storm in my notes on February 23 [shot Moth was February 22, measuring 2 kilo tons]. In 1956 I spent the summer at Hanford. [Hanford Nuclear Reservation in Richland, Washington, where the plutonium for the first atomic bombs was processed during the Manhattan Project, remains an environmental "dead zone" to this day. The area downwind is often referred to as a "national sacrifice area" by its residents.] I was exposed to radiation and my coworker, a professor of physics, died of leukemia shortly thereafter. We were working in the basement on one of the reactors. My job was to examine the Purex process separating uranium from plutonium. It wasn't the best way of doing it. I think there was a leak. My son Russell worked on a cancer study of dogs [at the University of Utah]. The research he was doing was feeding beagles small amounts of radium and plutonium and comparing the incidence of cancer death in the dogs. So we had some notion as to the relative toxicity of radium versus plutonium, and the fact that while civilization has built up some tolerance to uranium, there is no such tolerance to plutonium. We were exposed without knowing it – we wore film badges, but they're only read after the fact. We wore no masks, just some protective clothing. There was a minor flap at the time, testing of urine and blood samples, but no report back to us at all. So again, we had no way of knowing what was going on. Nothing was ever said. Nobody said a word to us, not my supervisor, nobody.

I had a tired, ill feeling and the blood tests showed the platelets and everything messed up. It stayed like that a very long time. The Veterans Administration hospital here [in Salt Lake] admitted to me that I had radiation sickness. To give you an idea of how bad it was, about ten years ago I had an annual physical with one of those physicians out at Hercules. On this one occasion he sat me down and poked into my file and looked at me and said, "You're dead." Well, I knew by that time that it was a game. I said, "But Doc, I feel particularly good today." He said, "Doesn't matter. You're dead." I'd like to put in here that nobody ever dies of radiation poisoning. The government has a very good case. The vital statistics of the U.S. only allow you to die of one of 73 causes. Radiation poisoning isn't one of them. The computer won't take it.

When the government doesn't want things out it suppresses them with vigor. And you have to understand that anybody in a university may not talk to you at all, the reason being that all the money comes from Washington. If any researcher dared to chip away at the stonewalling of the government, he just need not apply for any further grants. Without grants at the university, you starve to death. Or you're let go. Publish or perish. It's as easy as that. There were a few people who brushed up against the AEC, as I did, and got them mad at them. I'm a survivor … this house was torched, my children were threatened, my job was threatened, and when we had a boy spending the summer in Dallas, Texas, I remember being called and the voice said, "you wouldn't want anything to happen to Tom, would you?" It's all the same thing: shut up or else.

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[*] Excerpt from Carole Gallagher's *American Ground Zero: The Secret Nuclear War* (Cambridge, Massachusetts: MIT Press, 1993), pp.259-261.