

Before Chernobyl: Hanford, Savannah River, and Rocky Flats

To the Editor.—In a commentary on Chernobyl, a hypothetical scenario is described by Dr Cassel: "Had an accident and radiation release of similar magnitude occurred at Hanford [Wash], the milk in Madison, Wis, would have been taken off the market because of unacceptable levels of radioactive iodine 131".¹ She further elaborates that farmers in Nebraska would be forced to discard their vegetables because of high radioactive contamination. Couples in Iowa would have been advised not to conceive babies for several weeks, parents with children would have left Spokane, Wash, because of increased radiation levels, and 500 000 people at an open-air festival in Chicago would have been drenched by radioactive rainwater. It is stated that "all these things occurred in places in Europe at comparable distances from the Chernobyl accident."

In fact, a release of iodine 131 of great magnitude did occur at Hanford in 1945. An estimated 340 000 Ci ($1258\,000 \times 10^{10}$ Bq) of iodine 131 alone were released from the plutonium plant, according to internal reports recently released from Hanford.² I do not know if there was an evacuation of children anywhere, warnings to couples not to conceive, or monitoring of radioactive contamination of milk, vegetables, or other food. This information was a carefully guarded secret from the public and from state and local public health officials for 40 years.

There was a release of 1576 Ci (5831×10^{10} Bq) of iodine 131 from the Savannah River Plant, Aiken, SC, in 1956 without public notice (105 times larger than that alleged to have been released by Three Mile Island) and an area of about 1000 km² around the plant had radiation levels in excess of 100 times background in 1955.³ In 1957, an explosion blew out all 600+ industrial filters in the main exhaust stacks at the Rocky Flats plutonium plant.^{2,4-6} The filters had not been changed in the previous four years of operation. There was a black plume of smoke over the Denver area for about 12 hours. The public was informed by plant personnel that there was no release of radiation of consequence, supported by state health department personnel who said, "In our opinion, any release from the plant would have stayed in the building."^{7,8}

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1. Cassel CK: Political and medical lessons from Chernobyl. *JAMA* 1986;256:630-631.
2. Heinz S, Roach-Monroe L: Hanford legacy. *The Oregonian*, May 12, 1986.
3. *Health Physics Regional Monitoring Semiannual Reports: 1955, 1956*. The Savannah River Plant, Aiken, SC.
4. Johnson CJ: Cancer incidence in an area contaminated with radionuclides near a nuclear installation. *Ambio* 1981;10:176-182.
5. Johnson CJ: Cancer incidence in an area contaminated with radionuclides near a nuclear installation. *Ambio* 1982;11:377-378.
6. Johnson CJ: Cancer incidence in an area contaminated with radionuclides near a nuclear installation. *Ambio* 1983;12:280-281.
7. Atomic plant fire causes \$50000 loss. *The Denver Post*, Aug 9, 1957.
8. \$50000 blaze hits atom plant at Rocky Flats. *The Rocky Mountain News*, Aug 13, 1957, p 46.