



## **Radiation Exposures to Early Nuclear Workers: A Special Report for USA Today**

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### **Press Release**

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## **U.S. Government Failed to Protect Early Nuclear Weapons Workers From Radiation Risks**

### **Some Forgotten Workers in 1940s and 1950s Suffered Huge Doses of Radiation, Study Finds**

#### **Study Raises Question of Whether Early U.S. Working Conditions Were as Bad as Those in the Soviet Union**

*Takoma Park, Maryland, 6 September 2000:* Many workers at privately-owned plants that the U.S. government used in the 1940s and 1950s for processing radioactive and hazardous materials for its nuclear weapons programs suffered large radiation doses, far in excess of then prevailing standards. The US government and its contractors were well aware of the dangers and deliberately misled the workers by providing false reassurances of safety, according to [a study by the Institute for Energy and Environmental Research \(IEER\)](#) based on official documents of the time. The study, which assessed radiation doses to workers at three of the dozens of factories that processed nuclear materials, was commissioned by the newspaper, [USA TODAY](#), which is publishing a series of articles based on an extensive investigation.

“Until we performed these calculations, research indicated that working conditions in the Soviet Union in the 1940s and 1950s were far worse than in the United States,” said Dr. Arjun Makhijani, president of IEER and principal author of the report. “But the highest doses we found were so huge that this assumption needs to be questioned. While we do not have data from comparable Soviet plants of the time, the data that we do have indicate that we should no longer assume that the worst exposed US workers during that period had greatly lower radiation doses and risks than their Soviet counterparts.”

The study examined documents and radiation dose data from:

- The Simonds Saw and Steel Co., a steel rolling mill in Lockport, New York, near Buffalo, where uranium and thorium metal was rolled into rods on a part-time basis.
- The Harshaw Chemical Co. in Cleveland, where operations to make uranium hexafluoride began during the Manhattan Project. They continued at a great pace after World War II.
- The Electro-Metallurgical plant in Niagara Falls, NY, where uranium metal that would eventually be used in plutonium production reactors was made.



Workers at the private sites were exposed to a variety of risks, including toxic materials like beryllium, chemicals like fluorine, and radioactive materials, notably uranium, but also thorium.

“The most severely exposed workers had a greatly increased risk of dying from cancer,” said Bernd Franke, a co-author of the report and a senior consulting scientist to IEER. “The risk of respiratory and kidney diseases would also be elevated.”

The highest cumulative radiation dose calculated by IEER corresponds to a 40 percent chance of dying from cancer due to the exposure – a 200 percent increase in the risk of fatal cancer compared to unexposed people, according to the report.

“Working conditions were appalling,” said Dr. Makhijani. “Data from all three factories that we studied show that the radiation protection standards of the time were routinely violated. And there is incontrovertible evidence that the government, putting production first, failed to adequately protect the workers or properly inform them of the severe hazards that many of them faced.”

Before the government built and opened its own large-scale plants for processing bomb materials, scores of private plants across the United States were used in the 1940s and 1950s to provide materials for the furious pace of nuclear-bomb building after World War II. Plant and government data clearly document that the air that workers breathed was contaminated well above allowable limits, at times dozens or even hundreds of times above those limits, for long periods of time. There is even documentation that the government simply did not want the workers to know the risks that they faced.

For instance, W. E. Kelley, Manager of the New York Operations Office of the AEC, wrote, that “if popular opinion has any basis at all, a distinct hazard does exist” in a highly polluted part of one of the plants. But he also stated that “how serious a hazard exists is a matter of individual opinion.” His letter documented that plant air sometimes exceeded what were then considered tolerable levels by hundreds of times, and that medical evaluations of radiation dangers were “becoming more conservative, and in some respects, more pessimistic about the eventual mass [?] outcome.” Yet, in the same letter, he reported that a staff member of the AEC had told workers at the same plant that “all of our [AEC] records indicated that no unusual hazard existed.”

“A full accounting of the failure to warn or properly protect nuclear weapons workers by the government is surely due to the people of the United States,” said Dr. Arjun Makhijani. “And the first and most urgent step is to provide treatment to those who are sick and compensation to those who were harmed.”

On September 7, 2000:

- IEER’s full report to USA TODAY will be posted on the USA TODAY web site at <http://www.usatoday.com/news/poison/cover.htm>.
- At 10 a.m., Eastern Daylight Time, Dr. Makhijani will hold a press conference at the National Press Club, First Amendment Room, 529 14th Street, NW, Washington, DC, where he will release the full IEER report and the associated documents.
- At noon, Eastern Daylight Time, Dr. Makhijani will participate in an on-line chat hosted by USA TODAY web site.



**Some more information on the health and environmental impacts of nuclear weapons production:**

- [Articles on Fernald](#) (*Science for Democratic Action* vol. 5 no. 3, October 1996)
- [Health Risks of Ionizing Radiation](#) (*Energy & Security* #4)
- [Paducah — Never Again](#) (*Washington Post* op-ed)
- [Radiation Exposures in the Vicinity of the Uranium Facility in Apollo, Pennsylvania](#) (report)
- [“Rush to Rent”: DOE’s Leasing of Contaminated Facilities is Putting Workers at Risk](#) (*Science for Democratic Action* vol. 7 no. 3, May 1999)