

Radiation Sickness

By Kathleen Peabody

The Citizens' Resistance Against Fermi Two (CRAFT) works diligently to report the past, present and future of the nuclear energy industry, especially as it relates to our local reactor, Fermi 2. This source of electricity for people's use is also a source of extreme danger to the same people and to all life in this region. We need to acknowledge that nuclear reactors were built by people who knew, yet ignored, the dangers they pose.

One of the prohibitive hazards of generating fuel this way is the existential risk of radiation poisoning. Splitting atoms of uranium creates over 100 chemicals not found in nature, each of which is carcinogenic. Some of these gasses and tiny metal particles are routinely released from reactors into the air and water. Numerous reactors have experienced accidents and leaks in the past; radiation at amounts unable for us to withstand could be released from these plants. Fermi 2's location on the shores of Lake Erie threatens the health of this Great Lake, already compromised by human activity. Renovations to the reactor are now in process to convert the facility to one that would produce waste so toxic it could not be moved for one hundred years! It would be radioactive for thousands of years.

Radiation is measured in an international unit called a sievert (Sv). Symptoms of radiation poisoning show up with exposure to levels of .5 (1/2) Sv. More than 4 to 5 Sv is fatal. The twenty-eight workers who died at Chernobyl received doses up to 13 Sv.

Radiation from reactors causes debilitating diseases, which is its worst threat to humans. This has been named "acute radiation syndrome" and results from a large dose of high-energy radiation going through the body, reaching internal organs. Common early symptoms of radiation sickness are nausea, vomiting, and diarrhea, and can start within minutes of exposure. There is often skin damage, like a bad sunburn, and blisters or sores. In some cases, hair loss might be permanent. The symptoms can go away entirely for up to a few weeks, but if they return, they are often worse. Recovery from radiation sickness can take up to two years, but perils of other health problems remain after recovery, including a lifelong increased risk of cancer.

Before the 1985 Fermi 2 startup, the Monroe County rate for all cancers was roughly equal to the national rate. Since 1988, Monroe County's rate for all age groups, genders and ethnicities has steadily risen to over 14% above the U.S. Before Fermi 2 became active, cancer deaths of 24-year-olds and younger were below the national average. From 1992-2018, as Fermi 2 has operated, the rate for that age group grew to 38% above the U.S. rate, the highest of the 30 most populated Michigan counties.

Both the instability of the atoms and world leaders who see only military solutions to problems emphasize the urgency of this work to close this and all the nuclear reactors. In contrast to the expensive, danger-filled nuclear fission source, renewable energy sources such as solar, wind and geothermal contribute to the sustainability and health of the Earth, our beloved, only habitat.

Sources:

Basics Symptoms Oct. 19, 2020

by Matt Smith, medically reviewed by Carol DerSarkissian, M.D.

Fermi 2 Nuclear Reactor and Rising Cancer Rates Report, March 11, 2021

by Joseph J. Mangano, MPH, MBA

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