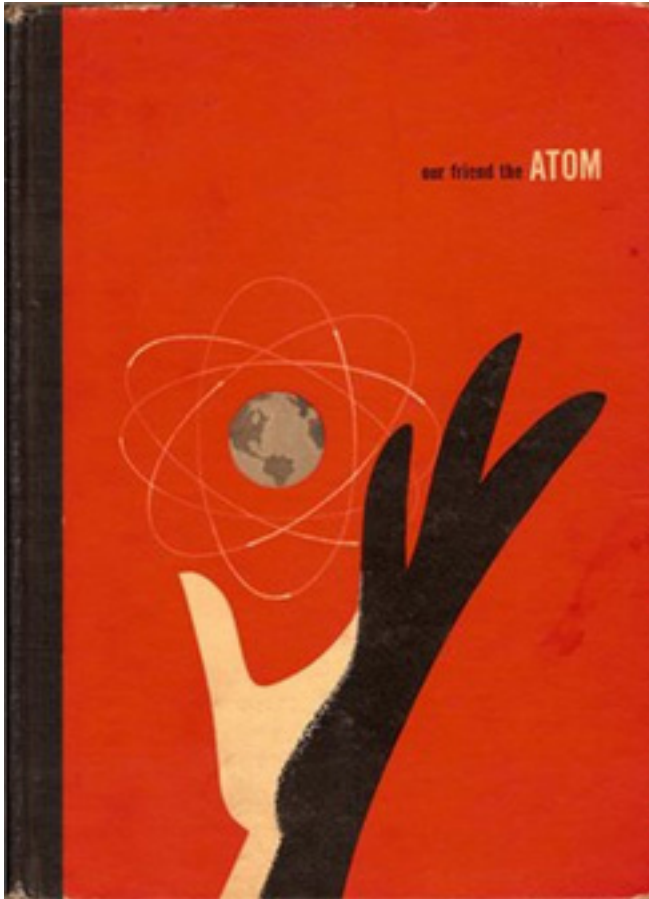


Yes, It Can Happen Here!

by George Crocker



How did we get to this? With a little indoctrination from Disney. The book, *Our Friend the Atom*, was published in 1956. It was followed by a documentary and Disneyland's Tomorrowland in the Magic Kingdom, to promote nuclear power. In 1983, Tomorrowland opened in Japan.

The Fukushima Dai-ichi nightmare continues, and the unforgiving nature of nuclear power becomes more apparent. It is likely to keep on getting worse until helicopters and concrete pump trucks bury the damaged reactors and radioactive waste under tons of concrete and sand with boron in it to absorb neutron radiation. Only now is the necessary equipment beginning to be dispatched, but until that is done, more irradiated fuel in reactor cores and dried-up storage pools will get exposed and melt and burn, perhaps explosively. Radioactive particles will continue spewing into the ocean and the atmosphere, contaminating global commons. To make matters even worse, the fuel in Unit 3 is made from "recycled" nuclear bombs called MOX, or mixed oxide fuel, and it contains plutonium. Plutonium has a half-life of 24,000 years, and the rule of thumb is that radioactive substances are dangerous for 10 half-lives. Plutonium is extremely carcinogenic if even a single molecule is ingested

or inhaled. Contamination from Fukushima will therefore continue causing premature death and disease throughout the world into the very distant future.

How could this happen? By accident? Accidents are preventable. But building nuclear reactors on tectonic faults by oceans, not only in Japan, but elsewhere as well, is the result of planning and ensures that such events will occur. The horrific event at Fukushima is the inevitable consequence of human folly, greed, and arrogance. People decided that earthquakes could be withstood and sea walls would keep tsunamis out. They had such confidence in their barriers and protections that they put backup systems on low ground by the sea wall. No, this was hardly accidental. Rather, it was the predictable and predicted result of really stupid human decisions.

There were warnings about this madness, year after year, for decades. In Japan, North America, Europe, and wherever else that nuclear power plants have been built, concerned, well-informed people have pointed out multiple scenarios that could lead to disaster, and had identified multitudes of cost-effective, reliable, safe, and clean alternatives for providing electric utility services. The problem with alternatives, however, is that they interfere with market share for energy cartels. So the madness continues, with blessings from politicians who are, at best, ignorant and myopic, and from bureaucrats whose first priority is to cover their backs, without rocking the boat.

It's not just madness. It's malfeasant madness, with public officials and media from virtually every major political and communications institution on earth engaging in crass complicity. Two circumstances illustrate this reality.

First, while there has been much discussion regarding the appropriate size of evacuation zones, with the radius theoretically corresponding to "safe" radiation dosages at given distances from Fukushima, there has been no discussion about "safe" doses. Yet the BEIR (Biological Effects of Ionizing Radiation) VII Report (June 2005) of the National Academy of Sciences established that every single increase in radiation exposure increases risk. There is no "safe" dose. "Safe" is an audacious euphemism for the nuclear industry definition of "acceptable premature cancer death."

Second, descriptions of radiological contamination of our environment provide no information regarding the fundamental distinction between radiation fields and radioactive particles. Background radiation fields are part of nature, and one experiences elevated background levels during airplane rides and x-ray examinations, for example. Radiation fields close to Fukushima are extremely high, severely limiting the activity of responders. But the number of radioactive particles now traversing the globe has been greatly increased. These particles can be, and are being, ingested and inhaled. Once they get inside the body, they are no longer "background radiation." Instead, they get retained in glands, tissues, and bones. Radiation emitted by these particles passes through and damages nearby cells over

and over and over again, and there is no chance to heal. Once retained, these particles become extremely efficient carcinogens, regardless of background levels at the time of inhalation or ingestion. (Normally operating nuclear power plants routinely emit radioactive particles at levels much less than Fukushima now, but still at levels that are very significant regarding their ability to get ingested and inhaled.) Many of these particles will continue cycling through the biosphere causing sickness and premature death for many generations to come.

Anyway, the boat's been rocked and the infallibility of nuclear energy is exposed.

Don't think it can't happen in Minnesota.

Just because an earthquake and tsunami breached barriers in Japan doesn't mean that any number of different scenarios cannot breach them here. Many critical reactor parts and components are aging and deteriorating. When they fail, nuclear operators could lose control. A major tornado could knock out power and back-up generation long enough for a loss-of-coolant event. Undetected corrosion could lead to disaster as it almost did at the Davis-Besse nuclear power plant near Cleveland in 2002. Some fatigued, distracted, or incompetent reactor operator could make a series of mistakes, leading to component malfunction and cascading failure. There are dozens of ways in which terrorists intent on extracting massive damage could penetrate security and protective barriers and lay waste to reactors and spent fuel pools, which, by the way, at the Monticello nuclear power plant, approximately 40 miles from Minneapolis, are up in the attic, at the top of the building as they were at Fukushima.

It doesn't have to be like this. Nuclear power accounts for about 20 percent of Minnesota's electrical generation capacity. Energy efficiency alone could replace most, if not all of that, if society actually got serious about replacing inefficient lights, refrigerators, motors, and other uncontrolled and obsolete equipment, and installed efficient commercially available end-use devices to perform those same functions. We don't do that either, because current government regulations cause power companies to sell electricity, not end-use functions, and as with supply-side options, the alternatives interfere with the profitability of power companies. But maybe now, in light of the latest nuclear disaster, enough of us will realize what our stake in this energy business really is and demand change. Here's how we can begin.

The Minnesota Public Utilities Commission and the Minnesota Department of Commerce Office of Energy Security have been formally requested to initiate an investigation and review pertaining to nuclear reactor safety in Minnesota. Please send letters to each of the addresses below, supporting that request:

Dr. Burl Haar, Executive Secretary
Minnesota Public Utilities Commission
121 Seventh Place East, Suite 350
St. Paul, MN 55101-2147

Bill Grant, Deputy Commissioner
Minnesota Department of Commerce
85 Seventh Place East, Suite 500
St. Paul, MN 55101

George Crocker has been involved in energy issues since the Powerline Protest Movement in 1977. Together with Lea Foushee, he co-founded the North American Water Office (NAWO) in 1982. NAWO was the project sponsor of the Prairie Island Coalition during legislative struggles over expanded nuclear waste (cask) storage in the 1990s and provided leadership for community-based energy development to replace nuclear energy. George continues to work on these issues.