

VERMONT YANKEE IN PERSPECTIVE

Despite what we hear from our pro-Vermont Yankee neighbors, nuclear power is nasty stuff. Its genealogy can be traced back to the two atomic bombs the United States dropped on Hiroshima and Nagasaki in 1945. A total of about 214,000 people died. The resulting black eye for the U.S. prompted the development of a “peaceful atom” initiative that would use nuclear fission to boil water into steam to operate turbines to generate electricity. It was going to be power “too cheap to meter.” President Truman equated nuclear power with “harnessing the basic power of the Universe.” On the international scene, Winston Churchill hoped that bomb technology would be used “to conduce peace among nations...and become a perennial fountain of world prosperity.”

It is a cosmic shame that the public never recognized this as a con job worthy of Hollywood. Arrogantly supposing to harness nuclear fission is an inherently dangerous folly. Even a cursory peek at the Precautionary Principle should have stopped the enterprise in its tracks. Nevertheless, the Atomic Energy Commission (AEC) was established in 1946 “to ensure public health and safety from the hazards of nuclear power *without imposing excessive requirements that would inhibit the growth of the industry.*” When the irony of doing both tasks became too obvious, the Nuclear Regulatory Commission was formed by the Energy Reorganization Act of 1974 to take on the regulatory chores. The NRC gets most of its funding from the industry it regulates. It has now approved twenty-year license extensions for some 65 of the oldest nukes in the country despite such nuisances as tritium leaks into ground water (27 out of 104 reactors in the U.S. do it), metal embrittlement, underground electrical cables not qualified for submersion in water, overloaded “spent” fuel pools, inadequate security, and steam dryer cracks.

The 2010 Union of Concerned Scientists (UCS) Report on the NRC and Nuclear Plant Safety isn't particularly reassuring. Turns out that the NRC only audits about 5% of activities at power plants. There were 14 “near misses” at these plants in 2010. Recognized but misdiagnosed or unresolved safety problems can lead to serious accidents. The NRC in some cases tolerates safety problems. One has to wonder whether fixing such problems in a timely manner might be seen as “imposing excessive requirements on the industry.”

Seldom do we consider the entire nuclear fuel cycle in our local deliberations about Vermont Yankee. It's not just about the "24/7" production of electricity, the well-paying jobs, the taxes paid, the boost to the local economy, the generous donations to the community. The mining of uranium is a hazardous operation and typically leaves tailings in the open air that cause illness for nearby populations. The enrichment of uranium releases chlorofluorocarbons (CFCs), greenhouse gases 1,500 times more potent than carbon dioxide and produces "depleted" uranium (DU) which gets used by the military by the thousands of tons in various war zones around the world. When DU munitions explode, they leave a radioactive dust that has a half-life of 4.5 billion years. The dust gets into air, water, and soil. It causes birth defects that look like those in children born following the Chernobyl explosion in 1986.

After spending 18 months fissioning in VY's reactor core, the fuel becomes too radioactive and must be removed. It thereupon becomes known as "spent fuel" and goes to the spent fuel pool. VY's spent fuel pool was originally licensed to hold 800 spent fuel canisters. It currently holds about 3,000 (more than the number in all the pools at the Fukushima Daiichi plant) under a sheet metal roof robust enough, we're assured by the NRC, to repel a crashing airliner. Putting approximately 2,200 of those excess canisters into dry casks at about \$1,000,000 per cask might qualify as an "*excessive requirement*" and so it isn't being done.

"Spent fuel" from nuclear power plants is a potential source of plutonium for bombs. "Fat Man," the atomic weapon dropped on Nagasaki, was a plutonium bomb. Please note that part of the Mission Statement of the NRC is to "*promote the common defense.*" The United States apparently doesn't acknowledge that the Cold War is over. We currently have a stockpile of 5,000 nuclear warheads. One thousand eight hundred of them comprise our strategic arsenal, ready to be launched at a moment's notice. Russia, in turn, has hundreds or thousands aimed at us. A strategic barrage of these weapons is capable of destroying all life on planet Earth many times over.

VY's "spent fuel," aka High Level Waste (HLW) will be dangerous for hundreds of thousands of years. That time period would obviously include the life-spans of thousands of generations of our children and grandchildren and their children and grandchildren. By what conceivable blindness

do we justify subjecting them (and all other living beings) to that horror? After some 60 years of the atomic era, Science and Technology still do not have any safe way to dispose of HLW. It is madness to continue making more of it.

Need I remind us that there currently exist a number of much safer, cleaner, greener sources of energy? They don't need to be invented, they don't pose a mortal threat to the planet, they don't require federal bailouts for catastrophic accidents, they don't require evacuation plans, and they don't produce deadly waste material. And in this time of climate change and runaway greenhouse gases when "going local" will become increasingly important for our survival, these alternative energies can be life savers. And they will employ lots of people! What are we waiting for?

Maybe it's just a matter of time before the Occupy Wall Street protesters decide that nuclear power corporations also need to be made accountable to the people-"the 99%." Surely it's time for Vermont Yankee to retire, on 3.21.12 when its original 40 year operating license expires, if not sooner. It's time for President Obama, and Congress, and the States and all of us, to renounce any further taxpayer subsidies for the nuclear industry. It's time to finally get serious about safeguarding the only planet we'll ever have. A parting word from Albert Einstein: "The unleashed power of the atom has changed everything save our modes of thinking, and thus we drift toward unparalleled catastrophe."

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