

Why Hanford Nuclear Reservation Should Be of Concern to Us **by Taysie MollyRose Savage**

I live 395 miles from Hanford Nuclear Power Plant, but until now I knew little about it. It's there, like the trees in my yard, the sun in the sky, a freckle on my nose. In fact, it's so "there" it seems most people ignore it, skimming casually over news articles or ignoring plan outlines on "how to handle that Hanford problem." Infrequent news articles give assurances that the contaminated nuclear material leaking into the ground is not really something to be concerned about and that plans are underway to take care of it. So we go about our day-to-day lives, overwhelmed with bills, kids, bald tires, and colds.

But Hanford will never go away. The fifty-three million gallons of highly dangerous nuclear waste left from a time of complete idiocy will haunt our entire planet forever. The containers holding the waste are leaking, but never mind that little detail. Plans are now on tap to convert the contaminated waste into glass-like logs, a process called vitrification. The facility where the process will take place has already cost \$12 billion, yet it is still not up and running. Is this really the answer?

One problem with Hanford is its immensity. With 177 underground tanks located on 560 square miles, the reservation is vast. Increasing issues with tank leakage have officials concerned, and with good cause. Just where are those mysterious 150-300 gallons of waste that are disappearing from only one of the tested tanks going? It's a good thing those pesky leaking tanks are a whole five miles from the Columbia River, where millions of fish swim, people play, and farmers pump water to irrigate our food crops.

Should the waste at Hanford be of concern to us? You bet it should concern us, on several levels.

To start with, we should understand the nature of nuclear waste and how it functions. Some of the wastes contained in the Hanford tanks include uranium 235 and 238, plutonium 238, 239, 240 and 241, strontium 90, cesium 137, thorium, technetium-99, nickel-59, americium-241. Some of these elements occur naturally in our environment and some are the byproducts of nuclear fission. No matter where they come from, they all can negatively affect the health of living organisms.

These elements are absorbed by both soft body tissues and bones, where they can be stored for the remainder of our lives. Strontium 90 seeks bone tissue, and our bodies mistake it for calcium, welcoming this toxin where it then creates health problems. Thorium, plutonium, and uranium also become concentrated in bones, teeth, and soft tissues, causing various types of cancers.

Secondly, the longevity of these elements and the difficulty of simply monitoring them is a budget breaker for our society. Estimated cost for clean-up is in the multi-billions of dollars, and the job will more than likely be never-ending. Health programs are scuttled, educational plans garaged, and job creation delayed because of the financial drain on our nation's budget. Is this what we want for our future? Everyone agrees something needs to be done, but the solution isn't easy to come to.

Lastly, while some may believe vitrification is the Holy Grail we have been searching for, it's important to remember we once thought the same of Hanford itself. There are concerns about the process, such as how to store the vitrified products. Vitrified nuclear waste is still radioactive and must be transported and stored with this in mind. The current options include burying in the ground or deep in the sea floor. However, it's easy to see this only transfers the problem to a place that is even more unseen by the general population.

Hanford's existence needs to be of concern to all of our planet's inhabitants because it currently affects everyone, with the potential for even more serious consequences down the road. No one is immune. There is no vaccine or hiding place to protect us from its dangers. Our food sources, our air, and our water are at risk from contamination, and this should scare us into careful consideration prior to any action being taken. This should also cause us to pause and seriously ponder the intelligence of considering any process in the future that produces such toxic byproducts when we have no comprehensive plan to dispose of the waste.