



Tank Closure and Waste Management Environmental Impact Statement

The Stakes

Hanford's waste contamination is large in volume, concentrated in toxicity, and long-lived in nature. This creates severe limits in the actual treatment of much of the waste. Radioactivity cannot be neutralized. It must be immobilized, and the radioactivity decays over time. The time frames for the radioactive decay for certain elements are long. For Plutonium-239, it is 250,000 years. For Technetium-99 it is around for 2.1 million years. For Iodine-129, it is 15 million years. **This means that we will not be able to build a container that will outlast the toxicity of these nuclides.**

Another vexing issue is the toxicity of Hanford's radionuclides. Extremely tiny quantities of radiation can cause illness such as cancer. While federal limits are set to not exceed trillionths of a "curie" (a measurement of radioactivity), Hanford has *hundreds of millions* of curies stored onsite. This means that even if a small fraction of the radioactivity enters the biosphere - water systems, plants and animals – it can cause great harm. The current preference is to leave much of Hanford's radioactive and chemical waste onsite.



The Waste Treatment Plant under construction at Hanford.

The Draft EIS acknowledges that the remediation we undertake will determine future dose levels to the public. For instance, current drinking water standards for plutonium at the shoreline of the Columbia River will be *exceeded by 280 times the permissible limit* in about 1000 years even with an ambitious effort. If the government carries through on its plan to import and

dispose of offsite waste at Hanford, the risk levels will increase significantly.

In other words, the more remediation that is carried out, the more protective the cleanup will be in the future. Keep in mind, however, that the more the waste is handled, the higher the risk will be to workers. Therefore, in addition to protecting the environment and the public, any cleanup must safely manage risks to workers. Without an aggressive cleanup, downstream risks to members of the public who unwittingly use contaminated soil or water resources will multiply.