

HANFORD'S NUCLEAR WASTE TANKS

Fifty-four million gallons of High-Level Nuclear Waste are presently stored in 177 underground carbon steel tanks in the center of the Hanford Site.

Hanford's tanks were built from the 1940's to the 1980's, but were only designed to last for 20 years. One million gallons have leaked from 67 tanks.

OVERVIEW:

- **TOTAL:** 177 tanks
149 "single shell tanks"
28 "double shell tanks"
- **TOTAL VOLUME:** 54 million gallons of hazardous radioactive waste (including Strontium-90 and Plutonium)
- Tanks are located on "**TANK FARMS**", eighteen groups of tanks constructed in Central Hanford's 200 Area
- **UNDERGROUND STORAGE CAPACITY EACH TANK:** ranges from 55,000 to 1,000,000 gallons of waste
- **WASTE FORMS:** gases, liquids, semi-solids, solids
- **CURRENTLY:** Liquid waste has been pumped out of the single shell tanks into the double shell tanks, and efforts are now being made to transfer semi-solid and solid wastes

CLEAN UP PLANS

Tri-Party Agreement – the agreement that regulates Hanford cleanup stipulates that at least 99% of the material in each tank on the Hanford site must be removed, *or as much as possible with available technology.*

-There is, however, "cake waste" solidified at the bottom of the tanks that is difficult to remove, but may contain the worst contaminants and a high percentage of the tank's radioactivity.

Draft Tank Closure & Waste Management Environmental Impact Statement - the Department of Energy prefers the alternatives of removing 99% of the waste from the tanks (as opposed to 99.9% or 90%) and landfill closure for the tank farms:

- **Landfill Closure** – closure in which tanks & associated equipment are left in place and "capped". Two tank farms have "temporary" asphalt caps on them already.

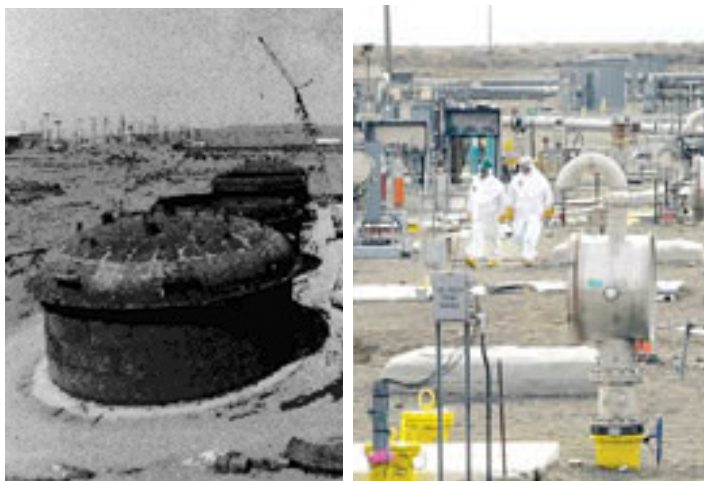
- **Clean Closure** – complete removal of tank and associated equipment from the ground and cleaning up contamination to a protective level.

Final Waste Clean Up - The last step of clean up is to pump the tank waste to the Waste Treatment Plant for treatment and vitrification (glassification). See the Waste Treatment Plant fact sheet for more information!

AT A GLANCE:

SINGLE SHELL TANKS	DOUBLE SHELL TANKS
<i>Total:</i> 149	<i>Total:</i> 28
<i>Design:</i> A single carbon steel shell surrounded by reinforced concrete	<i>Design:</i> Carbon steel shell surrounded by reinforced concrete, surrounded by a second carbon steel shell
<i>Status:</i> 67 confirmed to have leaked over 1 million gallons of High-Level Nuclear Waste	<i>Status:</i> Secure
<i>Notes:</i> Built first, between 1943 & 1964	<i>Notes:</i> Built between 1968-1986, to transfer leaking waste from the single shell tanks for more secure storage
<i>Acronym:</i> SST	<i>Acronym:</i> DST

THEN & NOW:



A Hanford tank farm under construction (left) and a current scene of monitoring the underground tanks (right)

For more information about Hanford Cleanup issues:



Heart of America Northwest
The Public's Voice for Hanford Cleanup!
www.hoanw.org