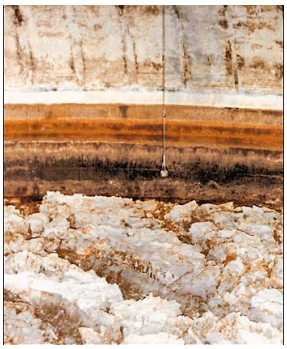
HANFORD'S WASTE TREATMENT PLANT

One of the largest public works projects in the nation will transform Hanford's High-Level Nuclear Waste into glass through a process called vitrification.

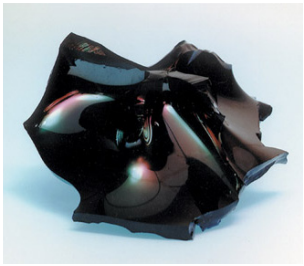
Vitrification is currently the only long-term solution for safe storage of Hanford's wastes that is protective of human health & the environment.



An inside view of one of Hanford's High-Level Nuclear Waste tanks.

Quick facts about the Waste Treatment Plant

- Location: Central Hanford
- Owner: US Department of Energy
- Contractor: Bechtel National, Inc.
- Research into vitrification technology has been in progress at Hanford since the early 1980's
- Waste Treatment Plant Project Start: 2001
- Construction Completion Estimate: 2016 (original estimate: 2011)
- Projected Start-up Date: 2019 (previous estimate: 2011)
- Projected Date of Full Operations: 2022
- Vitrification Completion Estimate: 2047 (previous estimate: 2028)



An example of vitrified radioactive waste in glass form.

HANFORD BACKGROUND

Situated along the Columbia River in Southeastern Washington State, Hanford is the site of the first and most extensive nuclear defense production program in the United States;

The most contaminated site in the Western Hemisphere and home to one of the most critical environmental clean-up problems in the country;

Annually receives billions of tax-payer dollars for environmental clean-up work.

Plutonium was produced at Hanford beginning in 1943 as part of the Manhattan Project in World War II and was not permanently stopped until the fall of the Berlin Wall in 1989.

Radioactive & chemical waste accumulated at Hanford, contaminating the soil and groundwater, after nearly 50 years of nuclear weapons production.

Currently, waste is stored in ***177 underground tanks*** that were built from the 1940s to the 1980s, but were only designed to last for 20 years.

The tanks contain ***54 million gallons of waste***, which accounts for 2/3 of the nation's High-Level Nuclear Waste by volume.

1 million gallons have leaked from the tanks. Waste has contaminated the groundwater, threatening the Columbia River and millions of people downstream from the Tri-Cities, WA, to Portland, OR.

Vitrification is the US Department of Energy's effort to convert Hanford's High-Level Nuclear Waste from short-term storage (tanks) to safer, long-term storage (glass).

WHAT IS VITRIFICATION?

Hanford's High-Level Nuclear Wastes are currently liquid & sludge, forms that are not easily stored and have leaked, contaminating the environment. Vitrification transforms radioactive waste into glass, a stable state for storage, when it can be buried:

- An electric power source creates heat to melt the waste
- When the heat is turned off, cooling solidifies the waste into a glass-like block
- The glass traps the radioactive contaminants so that they can be easily and safely buried, preventing them from further contaminating the environment

Advantage:

If the project is successful, it offers a safe, long-term storage solution for radioactive nuclear waste and would help prevent further contamination of Hanford's groundwater, the Columbia River, and the Pacific Northwest.

Drawbacks:

Massive undertaking to design, build & commission a waste treatment plant to dispose of 54 million gallons of radioactive waste;

The project has been fraught with delays and budget overruns;

Total cost of building the waste treatment plant = $12.2 billion.

For more information about Hanford Cleanup issues:

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