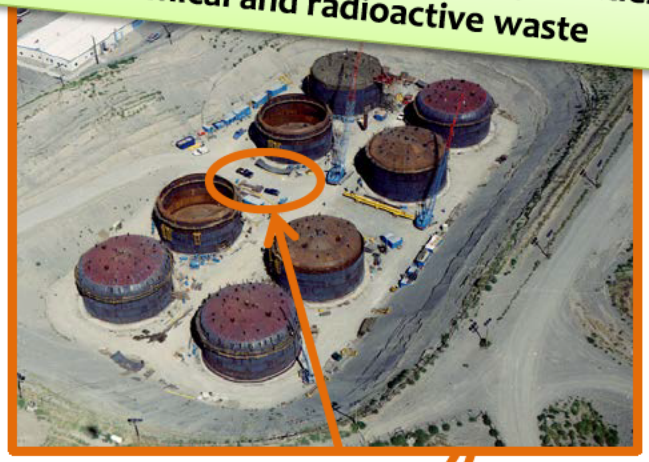
Double-Shell Tank System & 204-AR Waste Unloading Facility

Operating Unit #12

- 28 tanks in 6 groups, or *tank farms*.
- Capacity: 1 – 1.2 million gallons each.
- The double-shell tank (DST) system includes ancillary equipment: pipelines, pits with valves, jumpers, nozzles, and a cross-site transfer line from the SY Tank Farm in the 200 West Area to the AP Tank Farm in the 200 East Area.
- The 204-AR Waste Unloading Facility can receive and hold waste in a 1500-gallon tank to treat pH. It will not be used until it complies with regulations.
- The DSTs comply with regulations because they have leak detection. Their design is basically a tank inside a tank with leak detection in between.
- Built between 1971 and 1986.

Making plutonium created huge quantities of chemical and radioactive waste



241-AP Tank Farm construction. See black pickup trucks for scale.

Where does the waste come from?

Waste comes from the single-shell tanks, as they are emptied. Much of the waste came from dissolving fuel rods in acid to recover plutonium. The waste is high-level waste and has dangerous chemicals in it too.

How does this part of the permit differ from the usual?

Ecology required an integrity assessment to show the tanks can store waste safely. Some tank farm components don't comply with strict interpretation of the regulations. This is partly because the tanks were built long before regulations were written.

What's the risk?

The DSTs have limited capacity and are aging. Maintaining these tanks is important to ensure that waste is ready to supply the Waste Treatment Plant. The permit requires continuous leak detection to protect humans and the environment.