



# WEST VALLEY WASTE WATCH

Spring /Summer 2014

**PURPOSE of Newsletter :** To Regularly Review and Summarize Progress or Lack thereof and to Hold Officials Accountable for the Restoring the Environment and Protecting Future Generations from the Danger of Radiation due to Nuclear Reprocessing and Nuclear Waste Disposal at West Valley, NY.

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## *What's physically going on at West Valley?*

### *Building Demolition +Moving Intensely Radioactive High Level Waste Logs to an Outdoor Pad*

Plans are underway to demolish the main building at the West Valley site which reprocessed and solidified the hottest, most radioactive materials in the whole nuclear power and weapons production chain. The solidified high level waste is in the form of radioactive glass “logs” which are stored deep within the thick-walled building. The logs must be moved out before the building can be demolished. The building has to be taken down to get at the source of a radioactive plume that is migrating from under the building-- contaminating ground water, soil, surface water and creeks.

This radioactive strontium plume is believed to be from a spill in the late 1960s during the reprocessing in the main building. The hope is to excavate the highly contaminated “source area” of the plume. The current contract does not include the excavation to remove the source of the strontium plume. We are now relying on a “treatment wall” to capture strontium and reduce the levels of strontium leaving the site.

The main building at the West Valley site has three foot thick reinforced walls which have been shielding the high level waste stored within. The 275 radioactive glass logs are slated to be moved out of the building along with 5 other high level waste canisters. The logs give off 2500 rads/hour on average and one emits 7500 rads/hour. For comparison, 1000 rads will immediately kill anyone exposed. Because of these very high doses of radioactivity they cannot be handled by humans at all. Only remote controlled equipment can be used with cameras and with humans heavily shielded. It will take at least two years to move all the canisters from the building onto the concrete pad, assuming no problems occur. Moving this high level radioactive waste will be difficult, complicated and dangerous.

## MOVING IT WHERE?

The Department of Energy is not providing a new shielded building, despite the need for long term storage of this intensely high level radioactive waste, since the US has no permanent repository for this material. Instead the logs will sit in metal and concrete canisters on a concrete pad indefinitely. Five high level radioactive logs will be placed in each container which will then be inserted into a thick concrete cask. The whole thing is called a multipurpose canister. The inner part is intended to be used for transport to a permanent repository someday. Until that day, the multipurpose canisters will be lined up on the recently-constructed concrete storage pad located between the road and radioactive burial grounds. DOE says the dose to the public at the fence line will be at “legal” levels. *Note: Legal does not mean safe.*

As of June 2014, the high level waste casks had **not** been certified, but they are being built on site anyway. DOE assumes Nuclear Regulatory Commission will certify casks for transport of the West

Valley waste. DOE does not require *storage* certification, even though the logs could be stored there forever.

In September 2013, while digging to reinforce and build the high level waste storage pad, radioactive contamination was discovered at depth. Without fully characterizing the radioactivity or identifying its extent, DOE proceeded to construct the pad, in November 2013. NYS apparently did not object. Whatever contamination is there, will not be removed, since the high level waste logs will be stored above it indefinitely. As of June 2014, there is still no report on the contamination under the pad despite repeated expressions of public concern. This discovery of contamination reveals the inadequacy of the sampling and characterization being done at the site using only surface soil testing.

The West Valley Demonstration Project Act, the law dictating DOE's responsibilities, requires DOE to dispose of all the reprocessing waste off-site, so DOE hopes the solidified waste logs can be shipped in these same casks, to a permanent, licensed disposal site someday, somewhere. Even if a federal repository is eventually designed, approved and built, it is not certain that West Valley waste will receive a high priority to be sent there, since there are large and growing amounts of irradiated nuclear fuel waiting at over 100 nuclear reactors across the nation.

### BURIED and UNSECURED WASTE at West Valley poses greatest threat

There are huge amounts of radioactivity in underground tanks (sludge left from reprocessing and vitrification). There are 2 burial grounds with plutonium and much more. In addition there are significant inventories of waste stored above ground. This nuclear waste site is extremely vulnerable to erosion. Climate change and increased heavy rainfall events will only worsen the vulnerability of this situation.

One example is plutonium and other "transuranic" (TRU) waste. TRU waste is heavier than uranium, very long-lasting and especially dangerous if breathed or swallowed from contaminated air and water). It was formed in nuclear reactors. Because irradiated ("spent") fuel from nuclear power and weapons reactors was dissolved and reprocessed at West Valley, some of the largest amounts of transuranic waste remain there. The only transuranic waste disposal site in the country, possibly in the world, is the DOE-run Waste Isolation Pilot Plant (aka WIPP) near Carlsbad, New Mexico, which released plutonium into the air on Valentine's Day 2014 and was closed. Gross incompetence was found to have led to this disaster. Even if eventually is reopened, WIPP takes only weapons waste. West Valley waste is from both nuclear power and weapons.

There is also a lot of highly concentrated radioactive waste referred to as Greater Than Class C or GTCC at West Valley. (Class C is highly concentrated so called "low level" radioactive waste, some hot enough to give a lethal dose in 20 minutes, unshielded. Greater than Class C is even more concentrated.) There is no Greater Than Class C or GTCC disposal site although DOE has been seeking to find one for decades. So that waste will remain in storage indefinitely.

Strong public pressure is necessary to make sure future contracts are funded and include excavation and secure storage of **all** the underground radioactive waste.

*More information on West Valley: Citizens' Environmental Coalition [warrenba@msn.com], Nuclear Information and Resource Service [dianed@nirs.org], Indigenous Women's Initiatives [nyawehskanoh@gmail.com] and Coalition on West Valley Nuclear Wastes [WV-DigItUp@roadrunner.com] WasteWatch prepared by CEC & NIRS.*