Hanford Tank May Be Leaking Nuclear Waste Into Soil

SHANNON DININNY, Associated Press

(AP) — An underground tank holding some of the worst radioactive waste at the nation's most contaminated nuclear site might be leaking into the soil.

The U.S. Energy Department said workers at Washington state's Hanford Nuclear Reservation detected higher radioactivity levels under tank AY-102 during a routine inspection Thursday.

Spokeswoman Lori Gamache said the department has notified Washington officials and is investigating the leak further. An engineering analysis team will conduct additional sampling and video inspection to determine the source of the contamination, she said.

State and federal officials have long said leaking tanks at Hanford do not pose an immediate threat to the environment or public health. The largest waterway in the Pacific Northwest — the Columbia River — is still at least 5 miles away and the closest communities are several miles downstream.

However, if this dangerous waste escapes the tank into the soil, it raises concerns about it traveling to the groundwater and someday potentially reaching the river.

Washington Gov. Jay Inslee said the potential leak "raises very troubling questions." He said additional testing is expected to take several days, but he also said the state will be insisting on an accelerated plan to deal with all the waste at Hanford — something the state and federal government will be discussing in the coming weeks.

"If we do not receive satisfaction in those meetings in the next few weeks, we have several legal options available to us," Inslee said. "And we'll act accordingly."

The state says there is no immediate public health threat and that the river is not at immediate risk of contamination.

Tom Carpenter, executive director of the Seattle-based advocacy group Hanford Challenge, said, "This is really, really bad. They are going to pollute the ground and the groundwater with some of the nastiest stuff, and they don't have a solution for it."

Downriver from Hanford in Oregon, Ken Niles was somber.

"These last few months just seem like one body blow after another," said Niles of Oregon's Energy Department. "It's true this is not an immediate risk, but it's one

more thing to deal with among many at Hanford."

AY-102 is one of Hanford's 28 tanks with two walls, which were installed years ago when single-shell tanks began leaking. Some of the worst liquid in those tanks was pumped into the sturdier double-shell tanks.

The tanks are now beyond their intended life span.

Two radionuclides comprise much of the radioactivity in Hanford's tanks: cesium-137 and strontium-90. Both take hundreds of years to decay, and exposure to either would increase a person's risk of developing cancer.

The Energy Department announced last year that AY-102 was leaking between its two walls, but it said then that no waste had escaped.

However, Seattle television station KING5 has reported that the cleanup contractor knew a year earlier that the tank was leaking.

Mike Geffre, an instrument technician who works for contractor Washington River Protection Solutions, said Thursday's inspection came from a pit under the tank, like a saucer under a teacup. Water samples from the pit had an 800,000-count of radioactivity and a high dose rate, which means that workers must reduce their time in the area.

"Anything above a 500 count is considered contaminated and would have to be disposed of as nuclear waste," Geffre said. "Plus, the amount of material we've seen from the leak is very small, which means it's a very strong radioactive isotope."

At the height of World War II, the federal government created Hanford in the remote sagebrush of eastern Washington as part of a hush-hush project to build the atomic bomb. The site ultimately produced plutonium for the world's first atomic blast and for one of two atomic bombs dropped on Japan, and it continued production through the Cold War.

Today, it is the nation's most contaminated nuclear site, with cleanup expected to last decades. The effort — with a price tag of about $2 billion annually — has cost taxpayers $40 billion to date and is estimated will cost $115 billion more.

The most challenging task so far has been the removal of highly radioactive waste from the 177 aging, underground tanks and construction of a plant to treat that waste.

The one-of-a-kind plant, long considered the cornerstone of Hanford cleanup, will encase the waste in glasslike logs for permanent disposal. But workers designing and building it have encountered numerous technical problems, delays and skyrocketing costs.

The latest concerns center on adequate mixing of the waste, with the potential for explosions if radioactivity is allowed to build up in one area, and erosion and

corrosion in vessels and piping. Last priced at $12.3 billion, the cost is expected to rise further.

The plant isn't expected to begin operating before 2019, far beyond the original 2011 deadline.

Energy Secretary Ernest Moniz visited the site Wednesday for the first time since being confirmed by the Senate in May. He said he intends to have a new plan by the end of the summer for resolving the technical problems with the waste treatment plant.

Meanwhile, the Energy Department recently notified Washington and Oregon that it may miss two upcoming deadlines to empty some single-shell tanks and, amid the technical problems, to complete construction on a key part of the plant to handle some of the worst waste.

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AP Writer Mike Baker contributed to this report from Olympia.

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