

WIPP: Volume tracking adjustment could ensure plant's future

Adrian C Hedden, Carlsbad Current-Argus Published 1:59 p.m. MT March 7, 2018

CARLSBAD — Officials at the Waste Isolation Pilot Plant hope that by redefining how the volume of nuclear waste is calculated when emplaced in the underground repository, WIPP's mission could continue for the foreseeable future.

Under the current calculation methods, WIPP is about halfway to its allowed capacity.

With the changes, officials contend the facility is only about a third full.

That's why the Department of Energy and Nuclear Waste Partnership (NWP) submitted a modification to WIPP's permit with the New Mexico Environment Department (NMED) in January, to alter how volumes are calculated – to avoid counting the air between containers of waste.

More: [Air counted as waste? WIPP to adjust tracking of emplacement volumes](#)

The distinction centers around containers holding bins of the transuranic (TRU) waste disposed of at WIPP, and the air between the bins being added to the total volume of the waste emplaced.

Officials argued the exact volume of the waste itself is a better metric for calculating how much waste is in WIPP, and how much can be emplaced.

As part of the permitting process, the DOE and NWP are required to hold public meetings in the nearby community of Carlsbad, and at the State Capitol in Santa Fe.

During Tuesday's meeting at the DOE's Carlsbad headquarters, retired nuclear scientists, local leaders and concerned residents fielded questions with NWP leaders as to the purpose and execution of the modification.

"This is the key to WIPP's ability to expand the amount of waste that is out there," said **Roger Nelson**, a retired DOE scientist who worked on the WIPP project. "There's more TRU waste out there than we assumed. There's really no rational limit."

Nelson pointed to the initial estimation that 6.2 million cubic feet of the waste would be emplaced in the WIPP's salt deposit about 2,000 feet underground.

He said that estimate was made about 50 years ago, and recent research suggests there could be much more TRU waste than initial predictions.

The salt deposit where TRU waste is permanently stored is about 16 square miles and 3,000 feet thick, providing enough space for almost any amount of waste, Nelson said.

"The possible volume is essentially unlimited," he said. "To unscientifically constrain it is stupid."

The modification proposes several areas of WIPP's permit that define how to calculate waste, and how much space it takes up.

The DOE is requesting WIPP's volume of record for the federal WIPP Land Withdrawal Act (LWA), be based on the volume of the inner waste container, closer to volume of the waste itself, rather than the current methodology using the outer container's overall volume.

The outer volume would still be reported to the state, but by altering reporting under the LWA, officials hope to delay reaching the maximum capacity of 6.2 million cubic feet allowed under the act.



The issue of volume calculation was compounded by the use of “overpacks,” containers the drums of waste are packed into in case of rupture. Overpacks also ensure easy handling if the original package is awkward to transport, or to comply with certain transportation requirements.

“For the Land Withdrawal Act, you’re just counting the waste,” said Russell Hardy, director at the Carlsbad Environmental Monitoring and Research Center (CEMRC), an independent WIPP monitoring lab. “Where we get caught is at the LWA capacity. That’s a maximum number.”

Other adjustments proposed in the modification would make the permit's language consistent with such a change, and clarify the two methods of calculation.

“We’re not keeping two sets of books,” said Rich Chavez, manager of Regulatory and Environmental Services for NWP. “We can sort that information and report it in numerous ways, but it’s one book. For the permit, for the LWDA, we hope to move forward with counting the inner container.”

The outer volume will still be reported to the NMED, to track exactly how much space is left in the repository.

“The reason that’s important from the state’s perspective, is it is really what fits down there,” Chavez said.

Chavez said the idea of redefining the federal waste calculations was considered for many years, but only after the plant was fully recovered from a 2014 radiological release and three-year cease in operations, was it the proper time to submit non-recovery-related modifications.

“We’ve been discussing this for years,” he said. “During recovery, we were focused on recovery. All of the mods (modifications) we issued were related to recovery. Now we have an opportunity to submit other modifications.”

Nelson said after recovery is completed, DOE officials should focus on regulatory adjustments to ensure WIPP can continue to expand as more and more waste is sent in from national laboratories across the country.

“The accidents in 2014 caused this three-year hiatus,” he said. “Now WIPP has recovered, it’s time to get started with all the cleanup efforts to ensure that it succeeds in its mission.”

Bob Kehrman, a retired contractor at WIPP **said the change is necessitated by space being taken up at WIPP since the site’s first emplacements in 1999,** defeating past assumptions as to the amount of waste being produced, and the volumes at which it could be disposed.

“In the past, it looked like you had all this space,” he said. **“Volumes keep growing, and we need to be more efficient.”**

New Mexico State Rep. Cathrynn Brown (R-55) said the DOE must ensure the public is continuously updated on WIPP operations.

She said the modification could also prove a positive collaborative effort between the DOE and NMED.

“Someone finally called the question into how we’re calculating volumes at WIPP,” Brown said. “It’s an opportunity we should take advantage of. It’s an opportunity for NMED and the DOE to go back to logic and talk about what is waste, and what is not.”