

OREGON BUSINESS NEWS

Gas explosion at LNG facility in Washington prompts concerns about proposed export terminals in Oregon

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PLYMOUTH.JPG

A Williams Northwest Pipeline LNG facility is seen after a large explosion and fire in Plymouth, Wash. on Monday. ((AP Photo/The Tri-City Herald, Sarah Gordon))

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The Oregonian/OregonLive

Developers of the mammoth liquefied natural gas terminals proposed near Astoria and Coos Bay have downplayed public safety concerns since arriving in Oregon a decade ago, emphasizing the industry's stellar safety record around the globe.

Independent experts agree the track record is solid. But the debate could be reignited after Monday's gas explosion at an LNG facility near the Columbia River at Plymouth, Wash.

The LNG export terminals proposed on the coast dwarf the size of the Washington facility, and an expert who helped develop LNG hazard models for federal regulators says the risks of locating them near population centers are real.

The blast seriously burned one worker, who remains in a Portland hospital, and injured four others. It forced an evacuation of 400 residents and agricultural workers within a two-mile radius of the facility. River, highway and train traffic was restored Tuesday in the area, though authorities maintained a one mile exclusion zone around the facility until Tuesday afternoon because of the ongoing risk of an explosion.

A team of experts working with the facility's owner, Williams Northwest Pipeline, is still trying to determine what caused the accident and how to fix it.



Shrapnel from Monday's explosion reportedly punctured one of the two on-site storage tanks containing super-cooled gas in liquid form. Gas is still leaking from the tank in small plumes as the puncture repeatedly freezes over then thaws, and reportedly nauseated emergency responders evacuating residents on Monday.

"The tank is still punctured, it's still leaking and there is chemical in the area," said Deputy Joe Lusignan of the Benton County Sheriff's Department. "We're still in the middle of the game. Actually, I have no idea where we are in the game. Experts are still determining that."

The Williams LNG facility is part of the interstate pipeline system the company operates bringing Canadian natural gas through Washington and Oregon and into Southern Utah. The company uses the tanks as a backup supply to draw on during periods of peak demand. Northwest Natural Gas Co. operates similar facilities in Portland near the St. Johns Bridge and in Newport.



Opponents of the proposed export terminals have long pointed to the risks of locating them in earthquake and tsunami zones, close to population centers. They maintain that the chain reaction in Plymouth illustrates the potential for a catastrophic scenario.

“This should change the ballgame for LNG projects on the coast,” said Dan Serres, with the advocacy group Columbia Riverkeeper. “Unless they have an evacuation plan for Warrenton and part of Astoria, it’s unthinkable that they could make that work.”

Officials with the Jordan Cove project in Coos Bay and Oregon LNG in Warrenton said the tanks at their facilities would be fortified with reinforced concrete and another barrier of insulation. If a tank is compromised, an outside containment barrier could handle all the LNG contained within the tank, said Michael Hinrichs, a Jordan Cove spokesman.

Peter Hansen, chief executive of Oregon LNG, said the real takeaway from the Plymouth explosion was that nothing happened with the liquefied natural gas.



“An explosion and fire in a gas pipeline happened right next to an LNG tank and the tank was actually breached by shrapnel (VERY rare event) and LNG spilled into the containment basin - and what did NOT catch fire?” Hansen said in an email. “You got it, LNG did NOT catch fire - let alone explode.”

Interstate pipeline facilities like the one in Plymouth are regulated by the Federal Hazardous Materials and Pipeline Safety Administration, a division of the U.S. Department of Transportation.

Jordan Cove’s Hinrichs said the safety and security of the facility is being thoroughly vetted by the Federal Energy Regulatory Commission, the U.S. Coast Guard, and the Department of Homeland Security. Part of that process is to analyze the potential of a worst-case scenario, including the potential release of a vapor cloud.

“The FERC and LNG safety experts will determine if Jordan Cove's safety and security designs and operations are satisfactory to keep the community safe,” Hinrichs said.



Jerry Havens, a chemical engineering professor at the University of Arkansas, helped develop the vapor dispersion models that federal regulators used until recently to evaluate hazards from the facilities. He suggested the events in Plymouth should be cautionary. The risk of a tank breach may be smaller at an LNG terminal, he said, but the marine terminals increase the risk of a spill onto water, which could make the vapor dispersion even wider.

“We’re still learning about the safety of all these ventures because we’re moving into a whole new area where we’re handling such large amounts of LNG,” Havens said. “We’re talking about so much energy and so much potential for a catastrophic event to occur. We should really think about whether we should allow these things to be built close to any population center.”

Havens was hired in 2005 to assess risks of putting an LNG import terminal in the Port of Long Beach, Calif. Based on his analysis of industry and scientific studies, he defined



the hazard zone to the public as a minimum of a 3-mile radius from the facility. Warrenton, Astoria, Coos Bay and North Bend all fall within such a radius.

Hansen from Oregon LNG did not respond directly to a question about the hazard distance from his facility, but said, “real, certified experts” had evaluated hypothetical vapor dispersion issues, and that the company expected to receive approval from FERC.

“We do not self-certify,” he said. “These evaluations are done by Federal regulators.”

-- Ted Sickinger

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