

**SAFETY**

U.S. issues warning over Bakken-sourced oil

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Washington has issued a warning that crude oil originating from the Bakken region is more explosive than traditional oil, marking the first time since the Lac-Mégantic rail disaster that the U.S. government has acknowledged the dangers of shipping such volatile crude on trains.

The warning comes three days after a train carrying Bakken oil derailed in rural North Dakota, causing massive explosions and forcing evacuations. It was the third fiery oil train accident in less than six months, beginning with the derailment in Lac-Mégantic, Que., on July 6 that killed 47 people and gutted the town.

The U.S. Department of Transportation said it is conducting tests on oil from the Bakken region, which straddles North Dakota and parts of Manitoba and Saskatchewan, and is preparing to make changes to the way the rail and oil industries operate. In particular, the regulator will require crude producers and shippers to “degasify” risky oil before shipping it, which would mean stripping out highly combustible gases such as hydrogen sulfide, before shipping.

The announcement follows a Globe and Mail investigation that found that oil originating from the Bakken area, which blew up when a train derailed in Lac-Mégantic, is lighter and more volatile than typical forms of crude because it carries potentially explosive elements, such as higher levels of hydrogen sulfide. Those elements can vaporize when being transported by train, making the cargo dangerous. The investigation also found that companies were not testing many of their oil shipments before sending them and had no idea how volatile the oil was.

In its safety alert issued Thursday, the U.S. regulator said it is now investigating the gas content, corrosivity, toxicity, flammability “and certain other characteristics of Bakken crude oil.”

The announcement echoes a similar change in Canada a few weeks ago. Canadian Transport Minister Lisa Raitt said she would declare oil from the Bakken – and similar forms of light crude – to be an unusually hazardous product. This specialized declaration, which Ottawa had balked at for nearly a decade, will ensure new safety measures will to be placed on oil shipments, and hopefully avert future disasters. The change was a result of The Globe’s investigation, Ms. Raitt said.

Prior to the Lac-Mégantic disaster, oil was known to be flammable, but was not thought to be highly explosive. Since then, there have been two other explosive train derailments involving large shipments

of Bakken crude on trains carrying up to 100 tankers. An oil train derailed in Alabama in November, causing explosions that witnesses said resembled mushroom clouds. And on Monday, a train derailed outside Casselton, N.D., also resulting in huge blasts and plumes of smoke that threatened the nearby town.

The announcement, made by the Pipeline and Hazardous Materials Safety Administration (PHMSA) in Washington, comes as state officials in North Dakota, concerned about the negative press the Bakken industry was getting, were preparing to commission a study that would show that transporting crude by rail was safe. However, the U.S. federal regulator said it is now considering what “mitigating measures” may need to be taken “to ensure the continued safe transportation” of the oil.

“Recent derailments and resulting fires indicate that the type of crude oil being transported from the Bakken region may be more flammable than traditional heavy crude oil,” the U.S. regulator said Thursday. “Based on preliminary inspections conducted after recent rail derailments in North Dakota, Alabama and Lac-Mégantic, Quebec, involving Bakken crude oil,” the regulator said it would enforce rules that require oil shippers to “sufficiently degasify hazardous materials prior to and during transportation.”

This is significant because crude oil historically hasn’t required such measures. However, the crude sent by rail that exploded in Lac-Mégantic, and in the other two derailments, appears to be far more susceptible to vaporization than traditional oil shipments. Such vaporization is believed to be the cause behind the massive explosions. The Globe has shown that in North Dakota’s booming oil sector, several companies had warned about problems with high vaporization and hydrogen sulfide in the months leading up to the Lac-Mégantic derailment. However, regulators were slow to act on those warnings.

North Dakota is now the second-largest crude-producing state in the U.S., after Texas. However, due to a shortage in pipelines, roughly two-thirds of the crude it produces is shipped to refineries by rail. While oil was never shipped in mass quantities by rail, the practice has become common in the past three to four years, using trains consisting of 70, 80 and often 100 tanker cars.

In an interview Wednesday, Casselton Mayor Ed McConnell told The Globe that, while no one was injured in this week’s derailment, the death toll could have doubled what it was in Lac-Mégantic if the oil train had erupted inside a city. He said perhaps the oil should be carried in pipelines only. “Maybe it is just too dang dangerous to transport above ground,” Mr. McConnell said. “Maybe it should be stuffed into a pipe.”

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