

PSR



PHYSICIANS FOR SOCIAL RESPONSIBILITY

U.S. AFFILIATE OF INTERNATIONAL PHYSICIANS FOR THE PREVENTION OF NUCLEAR WAR

December 22, 2021

Pipeline and Hazardous Materials Safety Administration
U.S. Department of Transportation
Docket No. PHMSA-2021-0058 (HM-264A)

Dear Sir or Madame:

Physicians for Social Responsibility (PSR) is a nationwide 501(c)3 nonprofit organization dedicated to protecting human health and life. We are pleased to submit comments concerning the Pipeline and Hazardous Materials Safety Administration (PHMSA)'s proposal to amend the Hazardous Materials Regulations to suspend authorization of refrigerated liquefied methane (LNG) transportation in rail tank cars.

Based on the unacceptable threats to human health and life posed by rail transport of LNG, PSR supports the proposed amendment and further urges the Department of Transportation to ban all rail transport of LNG permanently, including revoking the special authorization in Florida to transport LNG along the Florida East Coast Railway.

Our position is based on the following concerns:

1. Risk of fire

The shipment of LNG via rail would impose significant fire and safety hazards for communities along rail routes. In case of an accident, LNG-by-rail can cause potentially catastrophic fires and explosions. This risk is most pronounced in densely populated urban and suburban areas. In the case of derailment of a train carrying LNG, should any of its cars be punctured and release LNG, the spilled LNG would likely re-vaporize quickly, forming a vapor cloud that could ignite. The ensuing fire could cause death and/or destruction to people, property, and natural resources over a large area. If the LNG failed to ignite initially, the unignited, dense LNG vapor cloud could move over a large distance, find an ignition source, and burn back to the point of the LNG release. In either case, the resulting fire is likely to be beyond the capacity of first responders to extinguish. As PHMSA itself acknowledged, in the draft environmental statement for an earlier proposal to grant an LNG-by-rail permit, "Response and mitigation techniques beyond evacuation for breaches in cryogenic tank cars do not exist or are impractical during a derailment scenario."

2. Risk of explosions

Additional risks arise from the possibility of explosion, should an LNG tank car catch fire and be engulfed by external flames. In an event known as a "Boiling Liquid Expanding Vapor Explosion" or BLEVE, flames heat the tank and the liquid it contains. When the liquid vaporizes, the vapor pressure within the tank can become so extreme that the tank explodes, spewing hot metal and releasing large quantities of both

liquid and vapor methane. A resulting fireball could affect a wide radius and could kill all within the immediate vicinity. PHMSA has stated that “No test data or mathematical models exist to predict whether and when an LNG tank car exposed to an external fire would undergo a BLEVE.”

3. Risk of terrorist attack

Another potential source of LNG-by-rail disaster must be taken into account: the possibility of a terrorist attack. The predictability and visibility of commercial rail traffic would make targeting easy; the passage of LNG trains through urban settings would make attacks potentially devastating to human life. Critical infrastructure would also be at risk, as might other adjacent strategic targets, especially if the LNG train were at port or near population centers.

4. Damage to the climate

LNG transport by rail serves primarily to feed foreign market demand for methane. Thus, any policy that facilitates this transport indirectly increases the demand for methane extraction, processing, transport and end-use. At all of these points, methane leaks into the atmosphere. As a potent greenhouse gas, trapping 83 times more heat than carbon dioxide over its first 20 years in the atmosphere, methane accelerates climate change. PSR joins the World Health Organization in recognizing climate change as one of the greatest health threats facing humanity. Direct effects of climate change include lethal heat waves, extreme storms and rising sea levels, which may cause illness, injury and death. Indirect effects include droughts, floods, the spread of pest- and waterborne diseases, air pollution, water pollution, crop damage, hunger and conflict. Children, the poor, the elderly, and those with a weak or impaired immune system are especially vulnerable to these dire effects on a livable environment.

5. Particular vulnerability of Florida

The State of Florida is particularly at risk from climate change impacts. The state’s extensive coastline makes it vulnerable to sea level rise, with cities like Tampa and Miami expecting multiple inches of sea level rise in even conservative modeling scenarios. Rising temperatures will expose more Floridians to the dangers of heat stroke, a life-threatening and potentially fatal medical emergency. Floridians are also vulnerable to increases in *Vibrio* bacteria and in the ranges of mosquito- and flea-borne diseases such as dengue, yellow fever, Zika and chikungunya. Thus, LNG-by-rail threatens Florida not only with direct effects from possible train accidents, but also with climate-related impacts on residents’ life and health.

In conclusion, based on well-founded concerns for human health and life, PSR calls upon PHMSA to adopt and enact its proposed amendment to suspend LNG transport by rail. We also call for a permanent ban on all rail transport of LNG, including revocation of the special authorization in Florida to transport LNG along the Florida East Coast Railway.

Sincerely,

Barbara Gottlieb
Program Director, Environment & Health