- compound the existing LNG risks to public health and safety and to the environment.
- 13. VENTING BOIL OFF GAS: If the train (or truck) is at a standstill for a long enough time, this vaporisation makes the pressure in the tank increase up to a pressure of 16 bar where a relief valve opens and gas is ventilated into the atmosphere to decrease the pressure in the tank. This released gas is called boil-off. Methane is a greenhouse gas (GHG), many times worse than carbon dioxide. Hence, venting natural gas into the atmosphere has a severe effect on global warming. Losing fuel also means losing money. See "How to Handle Boil-off Gases from LNG Trucks," Master thesis project, LIU-IEI-TEK-A--15/02235—SE, by Linda Gunnarsson and Erik Helander, 2015-06-04. https://www.diva-portal.org/smash/get/diva2:844798/FULLTEXT02.pdf
- 14. As Physicians for Social Responsibility point out in their January 13, 2020, comment letter, "Another potential source of an LNG-by-rail disaster must be taken into account: the possibility of a terrorist attack. The urban routing of LNG unit trains would make them highly vulnerable to attack by terrorists. 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. Human lives would be at risk, as would critical infrastructure and, potentially, other adjacent strategic targets." Solar panels have no such risks; even if targeted, they do not explode.
- 15. The most recent Intergovernmental Panel on Climate Change (IPCC) Report estimates that we need up to 50% reduction in greenhouse gas emissions by 2030 to limit atmospheric heating. Promoting LNG by rail works in the opposite direction, and should not be approved.
- 16. Methane is a far worse greenhouse gas than carbon dioxide: 86 times more efficient than CO2 at trapping heat over a 20-year period and 34 times more efficient over a 100-year period. Methane leaks at wells, from pipes, from liquefaction plants, from LNG truck or rail tankers if they crash, and from power plants. "Natural" gas is not a bridge fuel: it is a straight road to the drastic environmental results of global heating described by IPCC.
- 17. With Australia burning and U.S. average temperatures higher almost every year, we cannot afford more fracking, and we do not need LNG by rail driving it.

For all these reasons, I urge PHMSA to reject this LNG by rail rule.

Thank you for your consideration.

For the rivers and the aquifer,

John S. Quarterman
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Attachment: "FECR Movement of LNG ISO Containers by Rail, Quantitative Risk Analysis (QRA) Considering LNG Position in Train and Train Speed," Exponent Project No. 1308194.001, prepared for Florida East Coast Railway, LLC, December 8, 2016.