

Summary of the risk metrics for LNG ISO train movement and ISO lifting.

Risk Metric	Hialeah	Port of Miami	Port Everglades	Bowden Yard
SR Integral (total risk, yr ⁻¹)	(b) (4)			
Maximum IR (yr ⁻¹)	(b) (4)			
Train Movement (from Track):				
Max Distance to Zone 1 - 1×10 ⁻⁵ IR (ft)	(b)			
Max Distance to Zone 2 - 1×10 ⁻⁶ IR (ft)	(b)			
Max Distance to Zone 3 - 3×10 ⁻⁷ IR (ft)	(b)			
ISO Lifting (from Point):				
Max Distance to Zone 1 - 1×10 ⁻⁵ IR (ft)	(b)			
Max Distance to Zone 2 - 1×10 ⁻⁶ IR (ft)	(b)			
Max Distance to Zone 3 - 3×10 ⁻⁷ IR (ft)	(b)			

E.2.4 Benchmarking LNG against LPG

There is no current regulatory quantitative risk criteria for Individual Risk or Societal Risk of LNG transportation by rail, and the criteria used here were developed from those applicable to stationary LNG plants. Acceptable quantitative risk criteria for transportation of hazardous materials typically represent higher risk levels than stationary facilities. To benchmark the risk posed by LNG ISO train movements, the risk of movements of liquefied petroleum gas (propane or LPG) in the rail yards and along the mainline were analyzed. On an energy equivalence basis, (b) (4) 10,000 gallon ISO containers of LNG were compared to (b) (4) 34,000 gallon DOT-112 tank cars of LPG.

As a result of the QRA, the transportation and handling of (b) (4) LNG ISO containers was found to present similar or less risk than the movement of (b) (4) tank cars containing LPG. Accidents involving LPG cars were only considered during train movements in the rail yards since no lifting occurs with this car type. Overall, risk of transporting LPG was found to be comparable to LNG within the rail yards and intermodal facilities and was found to be slightly higher than LNG on the proposed routes. The overall risk for LNG ISOs in the Hialeah yard is significantly influenced by the contribution from lifting risk, which is not present for LPG. The risks between LNG and LPG are summarized in the tables below for mainline movements and for the Hialeah facility.