along any route was 11,800 people per square mile. This population density will therefore correlate to the highest risk for train movement anywhere along the mainline. As a conservative approach, using this population density will bound the risk for all sections of mainline track.

8.1.1 Train Speeds Less Than 25 mph

A summary of the baseline risk metrics for the LNG mainline movement at train speeds less than 25 mph case is provided in Table 40. The SR integral is the area under the FN curve presented in Figure 43. For comparison, the SR integral for the upper risk criterion is 6.91×10^{-3} when integrated from 1 to 1,000 (or 4.61×10^{-3} when integrated from 1 to 100). The maximum IR is always less than the Zone 3 3×10^{-7} yr^{-1} threshold; thus, no sensitive targets will be affected in the applicable sections of the routes for any population density less than or equal to 11,800 people per square mile.

Table 40. Mainline train speeds less than 25 mph - summary of the risk metrics for LNG ISO car train movements.

Risk Metric	Mainline Train Speeds < 25 mph
	C-1 (Baseline)
SR Integral (total risk, yr^{-1})	3.63×10^{-4}
Maximum IR (yr^{-1})	2.70×10^{-7}
Maximum Distance to Zone 1 - 1×10^{-5} IR (ft)	N/A
Maximum Distance to Zone 2 - 1×10^{-6} IR (ft)	N/A
Maximum Distance to Zone 3 - 3×10^{-7} IR (ft)	N/A

The maximum Individual Risk value of 2.70×10^{-7} yr^{-1} is located on the route. A representative graph of the IR value versus distance from the PHAST Risk software is provided in Figure 42. The IR never reaches the Zone 3 threshold value of 3×10^{-7} yr^{-1} for train configuration C-1 for the highest population density at low speed.