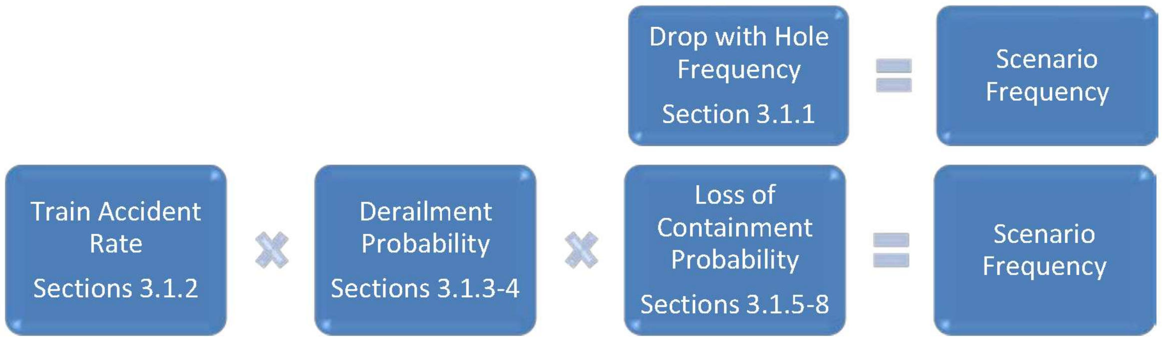

Figure E-1. LNG ISO train accident model overview.

Based on the assumed daily movement of [redacted] ISO containers, the analysis accounted for [redacted] lifts per day at Hialeah Yard, and another [redacted] lifts per day at the receiving intermodal facility. The frequency for dropping an ISO that results in a 50 mm hole was found in the literature to be 6.7×10^{-7} per lift. For [redacted] lifts per day, this resulted in the following release frequency for each intermodal facility.

LOC frequency for dropping an LNG ISO container.

Event	Release Frequency
Dropped ISO, large leak (50 mm hole)	2.2×10^{-3} yr^{-1}

FRA accident data from 1995 through 2015 were analyzed to develop train accident rates. Based on the available data, the train accident rate was calculated as accidents per train mile as shown in the table below. The accident rates for the last five years is provided for comparison and are approximately 20-25% lower than the historical average. However, the QRA conservatively applied the higher accident rate in order to provide an upper bound for the risk.

Train accident rates from FRA data.

	Statistic	2011-2015	1995-2015
Yard	Total Yard Train Miles	0.446×10^{9}	1.853×10^{9}
	Yard Accident Rate (/train mile)	1.55×10^{-5}	1.98×10^{-5}
Mainline	Total Non-Yard (Mainline) Train Miles	3.254×10^{9}	13.48×10^{9}
	Non-Yard Accident Rate (/train mile)	1.81×10^{-6}	2.47×10^{-6}

The position in train derailment probability was evaluated as a function of train configuration for LNG ISOs as part of the QRA. A derailment model was employed where the probability that LNG ISOs would be derailed in an accident was related to the probability of the first car derailed and average number of cars derailed. It was assumed that a derailment would involve