7 Results

Based on the forgoing discussion of the QRA assumptions, inputs, and calculations, the risk was calculated for the example route. The risk results are presented in the form of distance to Individual Risk thresholds, the Societal Risk integral, and Societal Risk as F-N curves for along the rail route. For the proposed mainline route, the risk results varied with population density along the railroad. The underlying accident likelihoods and release scenarios are independent of the route demographics; thus, the calculated shipping risk is directly related to the route length and population along the route. The risk is presented for a sequence of LNG DOT-113 cars shipped along the mainline at low speed and at high speed.

The risk profiles along the single mile-long section of the routes are discussed in the following sections. Although computationally efficient, examining the risk along only a single one-mile long section of route does not represent the entire risk for the proposed transport route. The total societal risk for the proposed transport routes is presented in Section 7.2.