3.1.3.2 Parametric Analysis of Train Configurations

Using the assumption that a train would contain [redacted] LNG ISO's, multiple train configurations were explored for the purpose of calculating the probability that multiple LNG ISO cars are derailed in a train accident. For example, [redacted] sequential LNG ISO cars will have a different probability distribution for number of cars derailed and release quantities than other LNG ISO car groupings (e.g., groups of [redacted] groups of [redacted] etc.). However, there are some constraints on placement of LNG ISOs in a train. For example, there must be at least [redacted] buffer cars between the first HAZMAT car and the front of the train. Also, trains will have a finite length depending upon the route and schedule. Thus, our analysis conservatively started with the first LNG ISOs no closer than car position [redacted] and no further back in a train than car [redacted] The resulting sensitivity analysis of multiple train configurations was used to identify optimum LNG ISO placement in a train. The following train configurations in Table 9 were considered in order to represent the effects of LNG ISO position and grouping within trains, and the configurations are illustrated schematically in Figure 26.

Table 9. Train configurations evaluated in the analysis.

Train Configuration ID	Description
C-1	• [redacted] LNG ISO cars in sequence • Train positions: [redacted]
C-2	• [redacted] LNG ISO cars in sequence • Train positions: [redacted]
C-3	• Two groups of [redacted] LNG ISO cars • Separated by 5 buffer cars • Train positions: [redacted]
C-4	• Two groups of [redacted] LNG ISO cars • Separated by 10 buffer cars • Train positions: [redacted]
C-5	• [redacted] groups of [redacted] LNG ISO cars and [redacted] single car • Separated by 10 buffer cars • Train positions: [redacted]
C-6	• [redacted] groups of [redacted] LNG ISO cars • Separated by 10 buffer cars • Train positions: [redacted]
C-7	• [redacted] groups of [redacted] LNG ISO cars • Separated by 5 buffer cars • Train positions: [redacted]