The probability of first car derailed as a function of position-in-train was calculated for the three cases (yard, low speed, and high speed). This data was then analyzed using the average number of cars derailed for each case to calculate the probability of having from one to ten LNG ISOs derail for the seven configurations described above. <sup>27</sup> A summary of the calculated probabilities is provided in Table 10 for mainline derailments with speeds between 25 mph and 60 mph.



The data for Case 3 demonstrate a significant reduction in the probability of having any LNG ISOs involved in a derailment ("Total" row from table) when moving from train configuration 1 (C-1) to train configuration 2 (C-2). However, the total probability of any number of cars derailing is not the only parameter to consider when minimizing the risk. The total probability increases from C-2 to C-3, but the number of LNG ISOs involved decreases from (b) (4) Thus, the total magnitude of the potential outcomes of C-3 will be less than C-2. As the configurations move from C-3 to C-7, the total probability increases but the maximum number of LNG ISOs involved in the derailment decreases. Using this approach allowed the

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Only Configurations 1-4 were considered for the yard derailment and mainline derailments with speeds less than 25 mph cases.