

permutations of LNG ISO car groupings in the train to be optimized for the QRA to reduce the risk.

The probabilities for the other two cases are provided in Table 11 for mainline derailments with speeds less than 25 mph and Table 12 for yard derailments. Only Configurations 1-4 were evaluated for these two cases. Although the total probability of having an LNG ISO involved in a derailment decreases from C-1 to C-2 for both cases, the maximum number of cars involved doesn't change for any of the configurations considered for either case. This is because the average number of cars derailed is only five cars for mainline derailments with speeds less than 25 mph and only four cars for yard derailments, compared to eleven cars for mainline derailments with speeds between 25 mph and 60 mph.

Table 11. Case 2 - Mainline train accident with derailment for train speeds less than 25 mph. Probability of having X number of LNG ISOs derailing in the event of a train accident with derailment, where X is the number of LNG ISOs involved. On average, 5 cars are involved in a derailment for this scenario.

(b) (4)

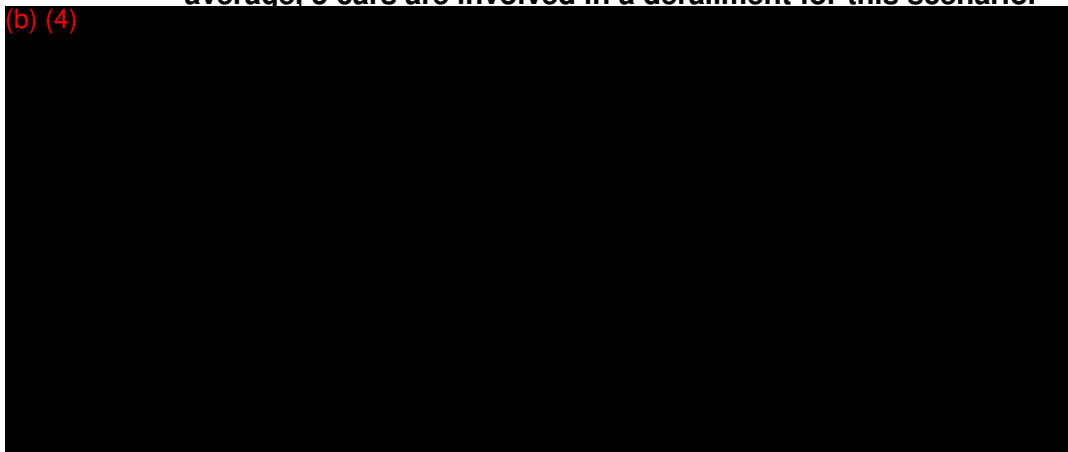
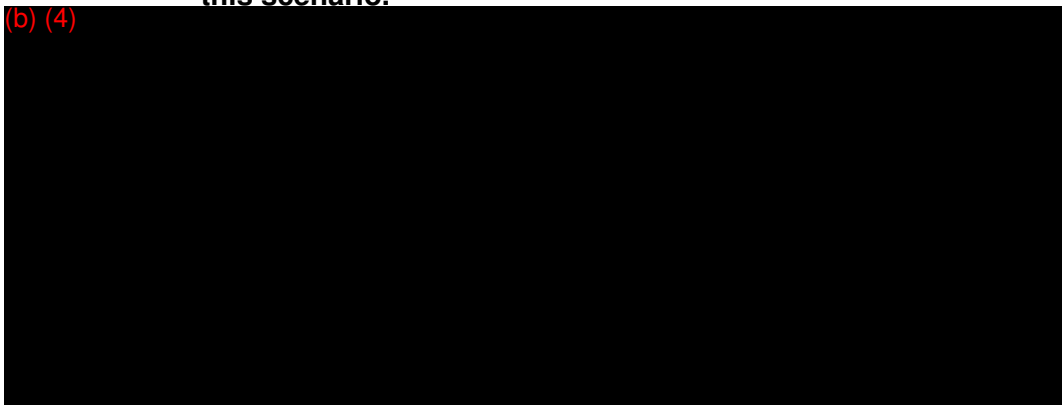
A large black rectangular redaction box covers the content of Table 11. The text "(b) (4)" is written in red at the top left corner of the redacted area.

Table 12. Case 1 - Yard train accident with derailment. Probability of having X number of LNG ISOs derailing in the event of a train accident with derailment, where X is the number of LNG ISOs involved. On average, 4 cars are involved in a derailment for this scenario.

(b) (4)

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