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(1) For division 1.1 explosives, the launch site operator must use tables E–1, E–2, and E–3 of appendix E of this part to determine the distance to each public area and public traffic route, and to determine each intraline distance.

(2) For division 1.3 explosives, the launch site operator must use table E–4 of appendix E of this part to determine the distance to each public area and public traffic route, and to determine each intraline distance.

(c) Separation distance by weight and table. A launch site operator must:

(1) Employ no less than the public area distance, calculated under paragraph (b) of this section, to separate an explosive hazard facility from each public area, including the launch site boundary.

(2) Employ no less than an intraline distance to separate an explosive hazard facility from all other explosive hazard facilities used by a single customer. For explosive hazard facilities used by different customers a launch site operator must use the greater public area distance to separate the facilities from each other.

(3) Separate each public area containing any member of the public in the open by a distance equal to \(1133.9 + 389 \ln(NEW)\), where the NEW is greater than 450 pounds and less than 501,500 pounds.

(d) NEW Quantities that Fall between Table Entries. A launch site operator must, when determining a separation distance for NEW quantities that fall between table entries, use the equation provided by tables E–1, E–3, or E–4 of appendix E of this part.

(e) Calculating Maximum Permissible NEW Given a Distance. A launch site operator must, when determining a permissible quantity of explosives, calculate maximum permissible NEW using the equation of tables E–1, E–3, or E–4 of appendix E of this part.

§ 420.67 Separation distance requirements for handling incompatible energetic liquids that are co-located.

(a) Separation of energetic liquids and determination of distances. Where incompatible energetic liquids are co-located in a launch or reentry vehicle tank or other vessel, a launch site operator must separate each explosive hazard facility from each other explosive hazard facility, each public area, and each public traffic route in accordance with the minimum separation distance determined under this section for each explosive hazard facility.

(b) Quantity. For each explosive hazard facility, a launch site operator must determine the total quantity of all energetic liquids as follows:

(1) The quantity of energetic liquid in a launch or reentry vehicle tank is the net weight in pounds of the energetic liquid. The determination of quantity must include any energetic liquid in associated piping to any point where positive means exist for:

(i) Interrupting the flow through the pipe; or

(ii) Interrupting a reaction in the pipe in the event of a mishap.

(2) A launch site operator must convert each energetic liquid's quantity from gallons to pounds using the conversion factors provided by table E-6 of appendix E of this part and the following equation:

\[ \text{Pounds of energetic liquid} = \text{gallons} \times \text{density of energetic liquid (pounds per gallon)}. \]

(c) Determination of separation distances for incompatible energetic liquids. A launch site operator must determine separation distances for incompatible energetic liquids as follows: