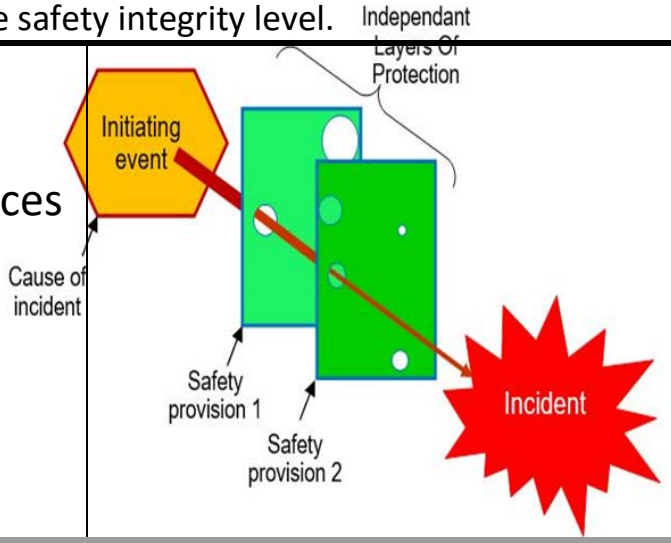
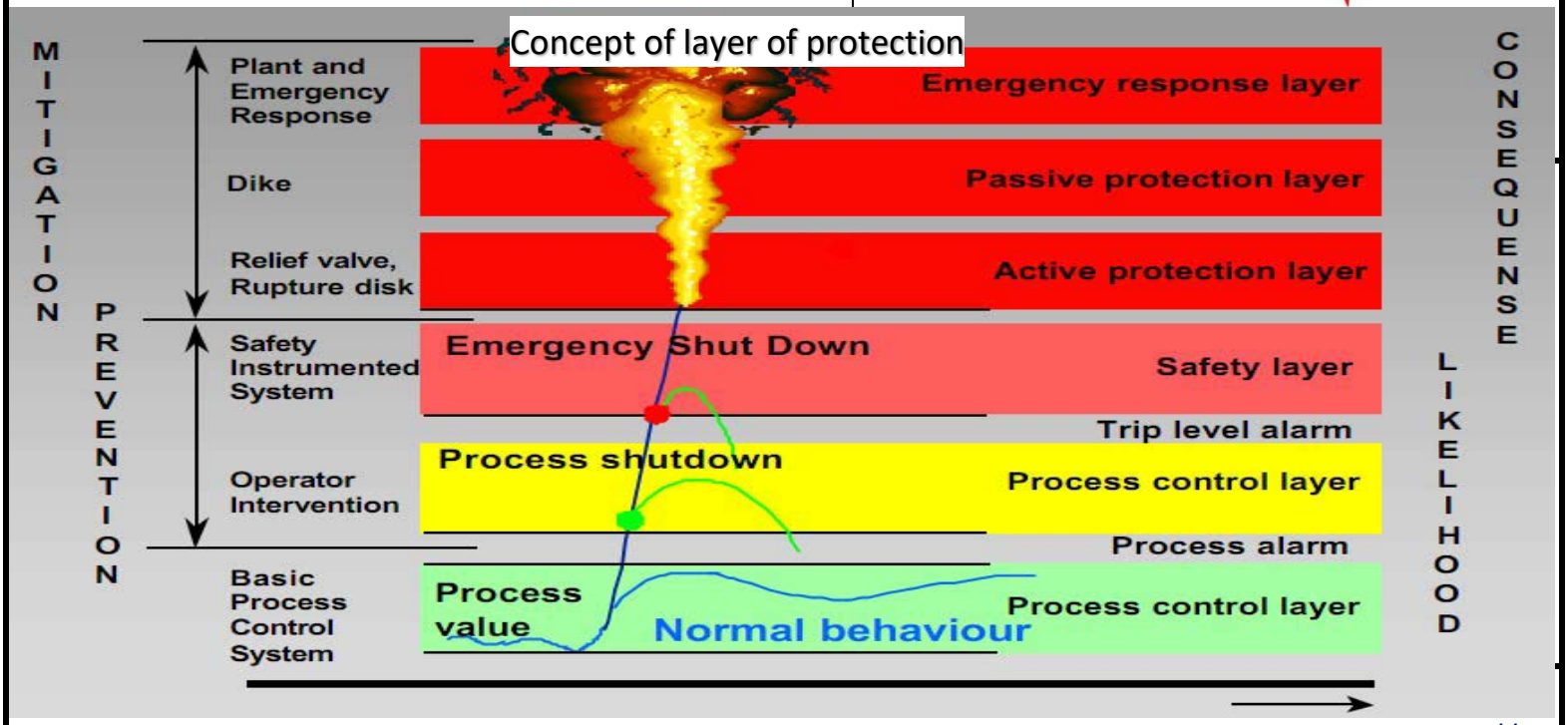
LOPA = Layer of Protection Analysis

Layer of Protection analysis (LOPA) is a simplified quantitative tool for analyzing and assessing risk. LOPA was developed by user organizations during the 1990s as a streamlined risk assessment tool, using conservative rules and order of magnitude estimates of frequency probability and consequence severity. Layer of protection analysis (LOPA) is a recently developed, simplified method of risk assessment that provides the much-needed middle ground between a qualitative process hazard analysis and a traditional, expensive quantitative risk analysis. Beginning with an identified accident scenario, LOPA uses simplifying rules to evaluate initiating event frequency, independent layers of protection, and consequences to provide an order-of-magnitude estimate of risk. LOPA has also proven an excellent approach for determining the safety integrity level.

LOPA methodology – step by step

1. LOC scenario
2. Causes (initiating event), consequences
3. Initiating event frequency
4. Acceptable incident frequency
5. Layers of Protection
6. What conditional modifiers
7. Mathematical check





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