

**Understanding DOE-HDBK-3010 Without Becoming an Accident  
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This presentation provides an overview of DOE-HDBK-3010, commonly known as the “DOE Accident Analysis Handbook”. The goal is to present the contents of DOE-HDBK-3010 in a conceptual way that may be more useful for hazards and safety analysts.

When working to DOE-STD-3009, accident analysis calculations often rely heavily on the values in DOE-HDBK-3010 given for airborne release fractions (ARF) and respirable fractions (RF) in accident scenarios. While accident analysts are responsible for the calculations that employ these ARF and RF values, it is important for hazards and safety analysts to understand what these values mean and how applicable they are to a given scenario. Recent DNFSB Recommendations at WTP have highlighted potential gaps in the DOE handbook that need to be communicated to the EFCOG community.

This presentation will briefly cover the accident analysis methodology, the contents and structure of DOE-HDBK-3010, the benefits and cautions when using the handbook, specific examples applying the handbook, a visual demonstration of ARF and RF values, and how WTP has responded to DNFSB questions on ARF and RF values.