Professional Certificate in Explosive Safety and Risk Management

Hazard Analysis And Risk Modeling

AARD: AARD refers to the Acute to Chronic ratio used in hazard analysis and risk modeling to determine the potential harm caused by a hazardous substance or material. Related terms include hazard quotient and risk assessment. The AARD is used to estimate the potential risks associated with exposure to hazardous substances over a long period.

Acceleration: Acceleration refers to the rate of change of velocity of an object or a person in a given direction. In the context of explosive safety and risk management, acceleration can be used to describe the rapid increase in pressure or temperature during an explosion.

Acceptable Risk: Acceptable risk refers to the level of risk that is considered to be tolerable or acceptable by an organization or an individual. Related terms include hazard analysis and risk assessment. The acceptable risk level is determined by evaluating the potential hazards and the effectiveness of the safety measures in place.

Accident: An accident refers to an unexpected event that results in harm or damage to people, the environment, or property. Related terms include incident and near miss. In the context of explosive safety and risk management, an accident can be caused by the ignition of an explosive substance or material.

ALI: ALI refers to the Annual Limit on Intake, which is the maximum amount of a radioactive substance that a person can be exposed to in a year. Related terms include radiation safety and nuclear regulations. The ALI is used to limit the exposure of workers to radioactive substances in the workplace.

As Low As Reasonably Achievable: As Low As Reasonably Achievable (ALARA) refers to the principle of keeping radiation exposure as low as possible, while still achieving the desired goals or objectives. The ALARA principle is used to minimize the risks associated with radiation exposure.

Assembly: An assembly refers to a group of components or systems that are assembled together to form a complete system or product. In the context of explosive safety and risk management, an assembly can refer to the combination of explosive substances or materials with other components or systems.

BLAST: BLAST refers to the Basic Local Alignment Search Tool, which is a software program used to compare biological sequences and identify potential hazards or risks. Related terms include genomics and proteomics. The BLAST program is used to analyze the genetic material of microorganisms and identify potential hazards or risks.

Boundary: A boundary refers to the limit or edge of a system or process. In the context of explosive safety and risk management, a boundary can refer to the perimeter of a facility or the edge of a hazardous area.

BPEL: BPEL refers to the Business Process Execution Language, which is a software language used to model and execute business processes. Related terms include workflow management and business process

modeling. The BPEL language is used to automate business processes and improve efficiency and productivity.

Burn: A burn refers to a type of injury caused by heat or fire. Related terms include thermal injury and flame burn. In the context of explosive safety and risk management, a burn can be caused by the ignition of an explosive substance or material.

CALPUFF: CALPUFF refers to the California Puff model, which is an air quality model used to predict the dispersion of pollutants in the atmosphere. Related terms include air pollution and environmental modeling. The CALPUFF model is used to predict the potential impacts of pollutants on the environment and human health.

CARVER: CARVER refers to the Critical Area Ranking Vulnerability Evaluation Resilience model, which is a risk assessment tool used to evaluate the vulnerability of critical infrastructure to hazards or threats. Related terms include risk management and threat assessment. The CARVER model is used to identify and prioritize vulnerabilities in critical infrastructure.

CBRNE: CBRNE refers to Chemical, Biological, Radiological, Nuclear, and Explosive hazards, which are types of hazards that can cause harm to people, the environment, or property. Related terms include risk management and hazard mitigation. The CBRNE hazards are considered to be high-consequence hazards that require special precautions and protections.

Chain Reaction: A chain reaction refers to a series of chemical reactions that occur in a sequence, often resulting in a rapid increase in temperature or pressure. Related terms include chemical kinetics and reaction mechanism. The chain reaction can be used to describe the ignition of an explosive substance or material.

Characterization: Characterization refers to the process of identifying and describing the properties or attributes of a substance or material. Related terms include hazard identification and risk assessment. The characterization of a substance or material is used to determine its potential hazards or risks.

Chemical Reaction: A chemical reaction refers to a process in which one or more substances are converted into new substances with different properties or attributes. The chemical reaction can be used to describe the ignition of an explosive substance or material.

Combustion: Combustion refers to a chemical reaction in which a substance reacts with oxygen to produce heat and light. Related terms include flammability and ignition temperature. The combustion of a substance can be used to describe the burning of a fuel or the ignition of an explosive substance or material.

Compatibility: Compatibility refers to the ability of two or more substances or materials to be used together without causing a hazard or risk. The compatibility of substances or materials is used to determine their potential hazards or risks when used together.

Component: A component refers to a part or element of a system or product. Related terms include system design and product safety. The component can be used to describe a part of a system or product that is

used to perform a specific function or task.

Concentration: Concentration refers to the amount of a substance or material per unit volume or mass. Related terms include dosage and exposure limits. The concentration of a substance or material is used to determine its potential hazards or risks.

Condition: A condition refers to a state or situation that exists or occurs. The condition can be used to describe a state or situation that affects the safety or security of a system or product.

Consequence: A consequence refers to the result or outcome of an event or action. Related terms include risk assessment and hazard mitigation. The consequence can be used to describe the potential harm or damage caused by a hazard or risk.

Containment: Containment refers to the use of barriers or controls to prevent the release or spread of a hazardous substance or material. Related terms include hazard control and risk mitigation. The containment of a hazardous substance or material is used to prevent or minimize the potential hazards or risks.

Control: A control refers to a measure or action taken to prevent or minimize a hazard or risk. The control can be used to describe a measure or action taken to prevent or minimize the potential hazards or risks associated with a system or product.

Cutoff: A cutoff refers to a limit or threshold beyond which a hazard or risk is considered to be unacceptable. The cutoff can be used to describe a limit or threshold beyond which a hazard or risk is considered to be unacceptable.

Damage: Damage refers to the or injury caused to people, the environment, or property. The damage can be used to describe the potential or injury caused by a hazard or risk.

Decision: A decision refers to a choice or selection made between two or more options. The decision can be used to describe a choice or selection made to prevent or minimize a hazard or risk.

Deflagration: Deflagration refers to a type of chemical reaction in which a substance burns or combusts rapidly, often producing a large amount of heat and gas. Related terms include explosion and ignition temperature. The deflagration can be used to describe the burning or combustion of a fuel or the ignition of an explosive substance or material.

Detonation: Detonation refers to a type of chemical reaction in which a substance explodes or combusts rapidly, often producing a shockwave and a large amount of heat and gas. The detonation can be used to describe the explosion or combustion of an explosive substance or material.

Dispersion: Dispersion refers to the spread or distribution of a substance or material in a medium such as air or water. Related terms include environmental fate and transport modeling. The dispersion can be used to describe the spread or distribution of a hazardous substance or material in the environment.

Dose: A dose refers to the amount of a substance or material that is absorbed or ingested by an organism or system. Related terms include toxicity and exposure limits. The dose can be used to describe the amount

of a hazardous substance or material that is absorbed or ingested by an organism or system.

Dose-Response: Dose-response refers to the relationship between the dose of a substance or material and the resulting effect or response. The dose-response can be used to describe the relationship between the dose of a hazardous substance or material and the resulting harm or injury.

Effect: An effect refers to the result or outcome of an event or action. The effect can be used to describe the potential harm or injury caused by a hazard or risk.

Efficiency: Efficiency refers to the ratio of output to input of a system or process. Related terms include productivity and performance metrics. The efficiency can be used to describe the ratio of output to input of a system or process.

Emergency: An emergency refers to a situation or event that requires immediate attention or action. Related terms include crisis management and disaster response. The emergency can be used to describe a situation or event that requires immediate attention or action to prevent or minimize harm or injury.

End Point: An end point refers to the final result or outcome of an event or action. The end point can be used to describe the final result or outcome of an event or action.

Energy: Energy refers to the capacity to do work or cause a change. Related terms include power and force fields. The energy can be used to describe the capacity to do work or cause a change in a system or process.

Entry: An entry refers to the point or location at which a substance or material enters a system or process. Related terms include input and source terms. The entry can be used to describe the point or location at which a hazardous substance or material enters a system or process.

Environment: The environment refers to the surroundings or conditions in which a system or process operates. Related terms include ecology and conservation biology. The environment can be used to describe the surroundings or conditions in which a hazardous substance or material is released or spread.

Equipment: Equipment refers to the tools or machines used to perform a task or function. Related terms include instrumentation and control systems. The equipment can be used to describe the tools or machines used to handle or process a hazardous substance or material.

Error: An error refers to a mistake or inaccuracy in a system or process. Related terms include failure and mistake proofing. The error can be used to describe a mistake or inaccuracy in a system or process that can lead to a hazard or risk.

Event: An event refers to a happening or occurrence that can have a impact on a system or process. Related terms include incident and accident investigation. The event can be used to describe a happening or occurrence that can lead to a hazard or risk.

Evidence: Evidence refers to the information or data used to support or prove a claim or hypothesis. Related terms include research and investigation methods. The evidence can be used to describe the information or data used to support or prove a claim or hypothesis about a hazard or risk.

Exposure: Exposure refers to the contact or interaction between a substance or material and a system or organism. Related terms include toxicity and dose response. The exposure can be used to describe the contact or interaction between a hazardous substance or material and a system or organism.

Facility: A facility refers to a building or structure used to house or support a system or process. Related terms include infrastructure and architecture design. The facility can be used to describe a building or structure used to house or support a hazardous substance or material.

Failure: A failure refers to the inability of a system or component to perform its intended function or task. Related terms include error and mistake proofing. The failure can be used to describe the inability of a system or component to prevent or mitigate a hazard or risk.

Flow: Flow refers to the movement or transfer of a substance or material through a system or process. Related terms include fluid dynamics and transport phenomena. The flow can be used to describe the movement or transfer of a hazardous substance or material through a system or process.

Function: A function refers to the purpose or role of a system or component. Related terms include design and operation modes. The function can be used to describe the purpose or role of a system or component in preventing or mitigating a hazard or risk.

Harm: Harm refers to the injury or damage caused to people, the environment, or property. The harm can be used to describe the potential injury or damage caused by a hazard or risk.

Hazard: A hazard refers to a source of potential harm or injury. The hazard can be used to describe a source of potential harm or injury that can be caused by a substance or material.

Hazard Analysis: Hazard analysis refers to the process of identifying and evaluating hazards in a system or process. The hazard analysis can be used to identify and evaluate the hazards associated with a substance or material.

Hazard Identification: Hazard identification refers to the process of identifying hazards in a system or process. The hazard identification can be used to identify the hazards associated with a substance or material.

Hazard Modeling: Hazard modeling refers to the use of mathematical or statistical models to predict or simulate the behavior of hazards in a system or process. The hazard modeling can be used to predict or simulate the behavior of hazards associated with a substance or material.

Hazard Risk: Hazard risk refers to the combination of the likelihood and consequence of a hazard. The hazard risk can be used to describe the combination of the likelihood and consequence of a hazard associated with a substance or material.

Ignition: Ignition refers to the process of initiating or starting a chemical reaction or combustion process. Related terms include flammability and explosion hazards. The ignition can be used to describe the process of initiating or starting a chemical reaction or combustion process that can lead to a hazard or risk.