PrimaTech
Specialists in Safety, Security and Risk

TRAINING

PHA for Batch Processes and Procedures

The performance of process hazard analysis (PHA) on batch or other non-steady state processes using methods such as the hazard and operability (HAZOP) study involves aspects that are not encountered for continuous processes.

The status and hazards of the process change with time, there is more human involvement and greater potential for human failures, and interactions may occur between batch steps. A knowledge of how to address procedures in PHA is required to perform PHA studies on batch processes.

However, the explicit performance of PHA on procedures for continuous processes, in addition to the performance of a normal equipment-based PHA study, also is valuable. Usually, it identifies additional hazard scenarios involving human failures.

This course teaches participants how to use the What-If, and Hazard and Operability (HAZOP) study methods to conduct PHA studies for batch processes and procedures. Preparation, organization and conduct of studies are covered. Attendees participate in workshops to practice use of the methods taught.

Objective:

Learn how to perform PHA on non-steady-state processes, such as batch processes, and procedures, such as operating procedures.

Target Audience:

Facilitators and team members for batch and procedural PHA studies. Personnel responsible for studies.

You will learn:

- How to perform PHA on batch processes and procedures using What-If and HAZOP methods
- What types of human failures are important for batch processes
- Information needed for batch PHA studies
- How to address batch recipes
- How to node batch processes
- What process deviations should be addressed
- How to manage the risk of batch processes
- When to conduct PHA on procedures
- What are typical problems with procedures
- How to improve procedures

Course Topics:

- Overview
- Special features of PHA for batch processes
- Need for PHA on procedures
- Design intent
- HAZOP and What-If
- Study preparation
- Information requirements
- Team composition
- Noding for batch processes
- Guidewords for procedural PHA
- Conducting studies
- Managing the risks for batch processes
- Ways to improve procedures

Duration:

One day, 0.7 CEUs or 7 PDHs awarded

For more information, contact:
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