

Risk Analysis Screening Tool (RAST), a 2-day Workshop

Who Should Attend

Staff involved in PHA

The Risk Analysis Screening Tool (RAST) is a collection of MS Excel® based Process Safety Screening Tools to assist in performing a Hazard Evaluation and Risk Analysis that draw upon the same basic input information. RAST uses simplified equations that have been quality checked and closely correlate to complex algorithms of many other commercially available analysis tools. These tools include:

- Hazards and Consequence Summary
- Reaction Hazards Evaluation
- Risk Scenario Creation
- Risk Analysis using Risk Matrix (as input by user)
- Relief Device Effluent Screening
- Dow Fire and Explosion Index (FEI)
- Dow Chemical Exposure Index (CEI)
- Risk Analysis using Layers of Protection Analysis (optional)

Learning Objective

This course will enable users to become familiar with the RAST tool so that evaluation teams, with the help of facilitators and process safety personnel, can perform screening level Hazard Identification and Risk Analysis (HIRA). An example problem is provided so that users understand the limitations of this tool and when to utilize more advanced methods or to engage a Subject Matter Expert.

Agenda

Day 1

1 – Introduction

- What is RAST
- Work and information flow within RAST

2 – Getting Started

- Opening the tool
- Example case study
- Data input
- Reports

3 – Chemical Data

- Data used
- Adding a new chemical
- Create a chemical mixture

4 – Reactivity Data and Evaluation

- Reactivity screening
- Data input
- Reactivity evaluation
- Example input and evaluation
- Process upsets

5 – Additional Input and Reports

- List of reports
- Additional inputs needed

Day 2

6 – Scenario Development

- Definition
- Loss of containment (LOC) events
- Scenario creation in RAST
- Initiating events
- Incident types and outcomes
- Screening criteria
- Scenario library
- User defined scenarios

7 – Risk Analysis

- Definitions (LOPA & Risk)
- Consequence modeling
- Likelihood/Frequency
- Risk Matrix
- Optional Selecting scenarios for LOPA

8 – Case Study

- Class exercise

9 – Summary

- Review