5 Advantages of SuperChems™ for Quantitative Risk Assessments (QRAs)

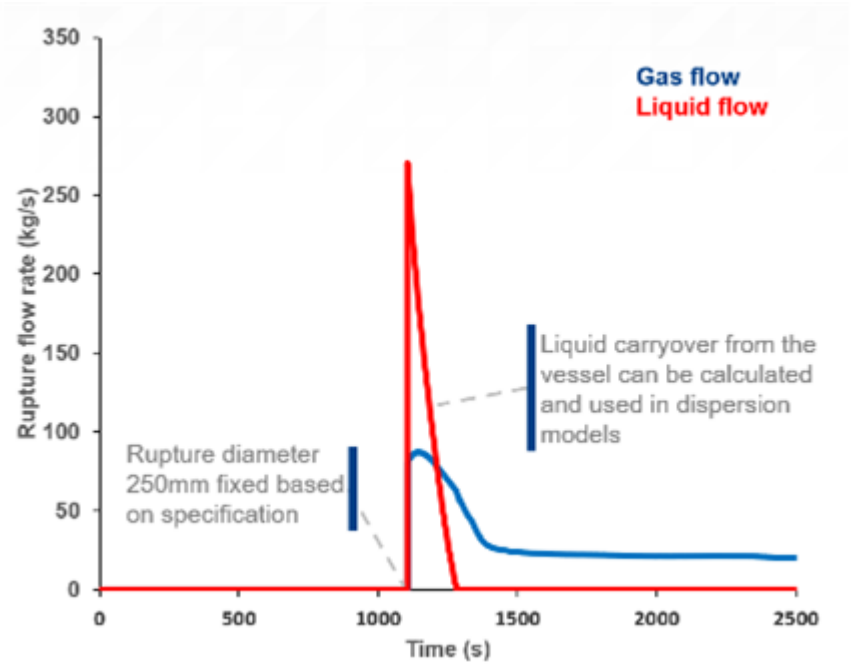
2021-06-25 - Corporate Communications - Comments (0) - News

A Quantitative Risk Assessment (QRA) involves the detailed estimation of the expected frequency and consequences of potential accidents associated with a facility or operation. A QRA is an invaluable method for making informed risk-based process safety planning decisions, as well as being fundamental to any facility siting decision-making. It enables a detailed understanding of process risks and where those risks arise from. In conducting a QRA, these risks can be better managed and mitigated.

Process Safety Office® SuperChems™ has all the functionality necessary to conduct a QRA and can be used for calculating risk for fixed facilities, pipelines, or transportation routes. Here are five advantages of using SuperChems™ for your QRAs.

1. Includes dispersion models for single and multi-phase systems

Accurately model vapor and two phase mixture dispersions.



2. Evaluates hazards accurately for complex mixtures

SuperChems™ enables users to accurately evaluate hazards for mixtures containing more than one flammable and/or toxic component.

Basic Infomation

Name: STREAM 317

Description:

☐ Mixture is soluble in water

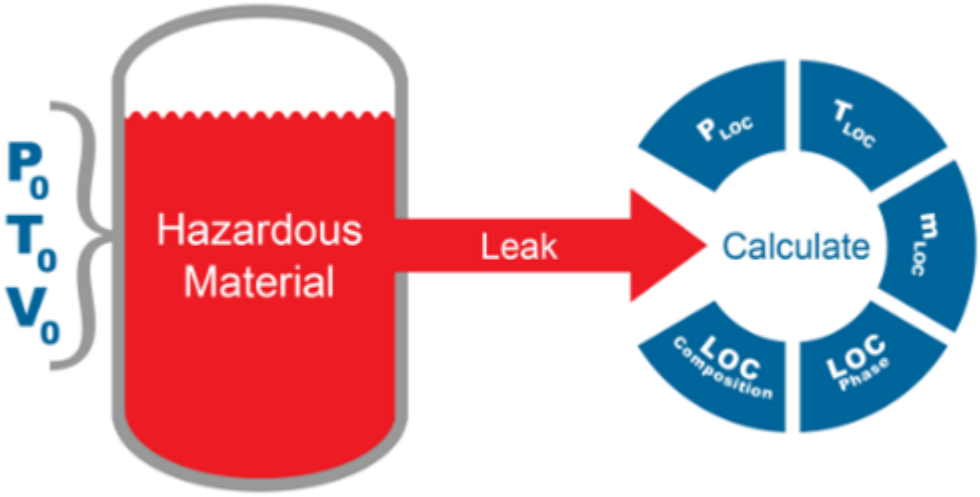
Mixture Composition

◉ Mass ○ Mole

Compound	Formula	ID	MW	Mass Fraction	Mole Fraction	User Composition
METHANE	CH4	0	16.043	0.0601	0.1054	0.0601
ACETYLENE	C2H2	141	26.038	0.0124	0.0134	0.0125
ETHYLENE	C2H4	84	28.054	0.6097	0.6108	0.6097
ETHANE	C2H6	1	30.070	0.2211	0.2067	0.2211
PROPYLENE	C3H6	85	42.081	0.0715	0.0478	0.0715
PROPANE	C3H8	2	44.097	0.0250	0.0160	0.0250

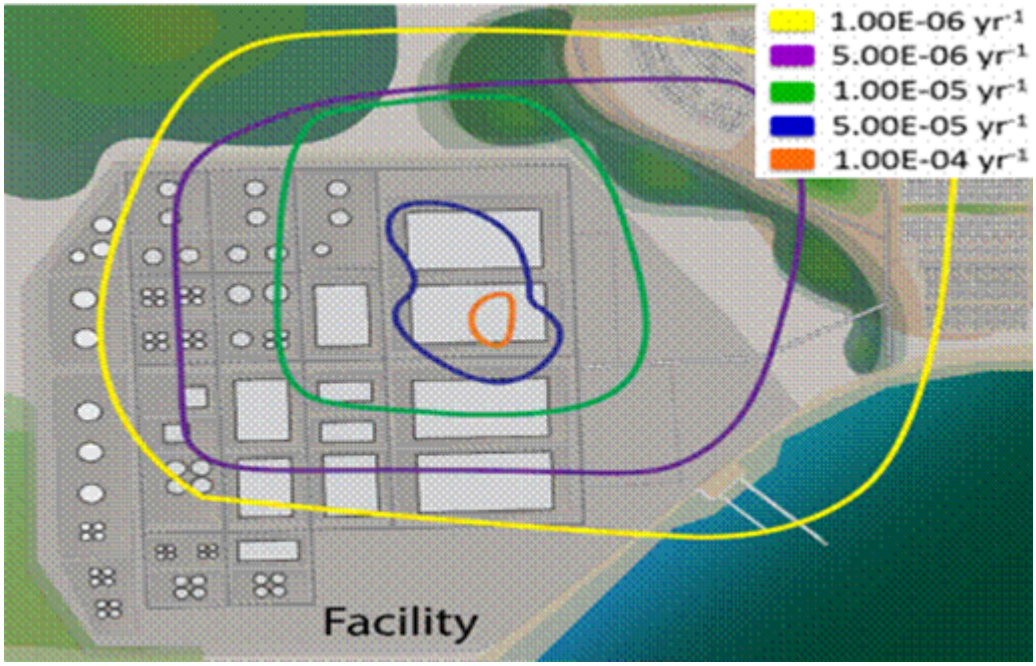
3. Defines relief rates precisely with source term models

SuperChems™ source term models are used to more accurately define relief rate rates based on process conditions, leading to a more precise estimation of risk.



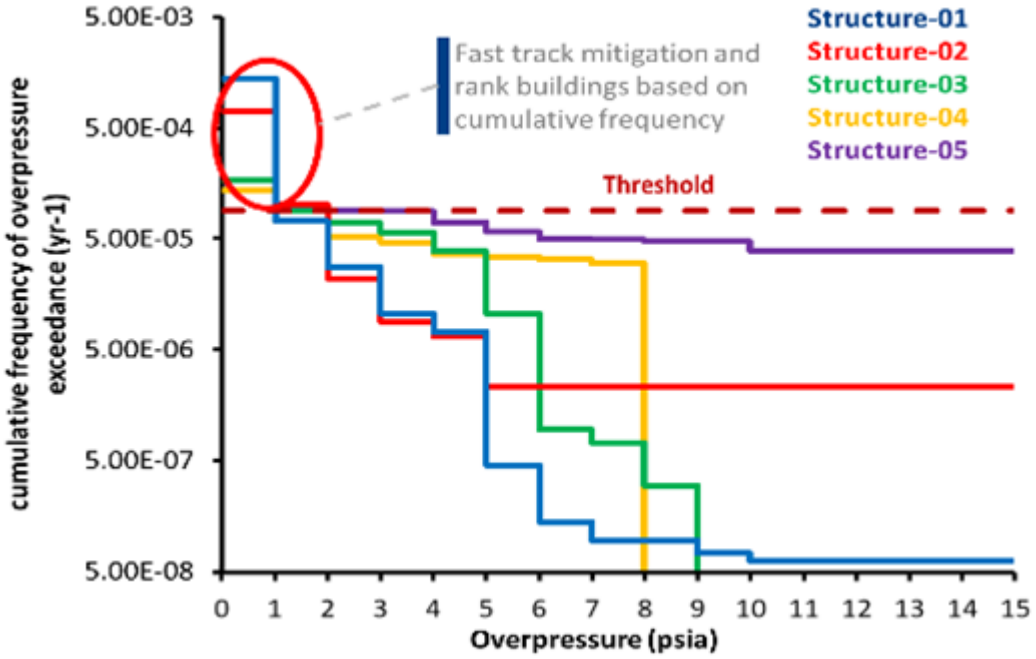
4. Overlays risk contours on geo-reference plot plans

Once you have determined the potential outcomes of a Loss of Containment, the consequence can be plotted against a geo reference plot plan – this takes credit for the elevation as well as the horizontal distance from the release source.



5. Calculates risk created from all loss of containment events

Using the consequence results and frequency data, SuperChems™ users can then build an accurate risk report to determine the levels of individual and societal risk for the site. The overall integrated level of risk created from all Loss of containment events can be calculated.



Questions?

To ask questions or get help from our highly trained technical support experts, please contact us at 1.844.ioMosaic or submit a ticket to our online support center. We'll be glad to assist.

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