

## PHAWorks Lite

PHAWorks® Lite is an alternative option for conducting PHA and LOPA studies to our flagship program PHAWorks RA Edition. The software allows you to conduct both PHA and basic LOPA studies together in the same worksheet. For those who don't require the features and flexibility of PHAWorks RA Edition, PHAWorks Lite will provide a tool to easily start documenting your studies.

### KEY BENEFITS

- Conduct PHA and basic LOPA studies in the same worksheet
- Intuitive user interface
- Use multiple PHA methods including HAZOP, What If, MHA, FMEA, HAZID, PrHA, Checklist, and Job Safety / Hazard Analysis
- Create and apply risk rankings
- Assign colors to cells in risk matrices to indicate risk levels
- Navigate easily between worksheets
- Drag and drop entries in the worksheet
- Zoom in and out to change the size of items in the window
- Perform LOPA worksheet math automatically
- Select from standard customizable reports or create and configure your own
- Convert your current PHAWorks 5 project files

Example (HAZOP - Traditional) - PHAWorks Lite

File Edit Format Navigate Worksheet Utilities Window Help

Main | Project | Sessions | Nodes | **Worksheet** | Reports

Node: 1. Chlorine rail car  
 Intention:  
 Drawings: (1) CLC/01-07-66  
 Parameter: Pressure

Guidewords	Deviations	Causes			Consequences			LOPA?	Safeguards				Enablers		Risk Afte...			Scenario Risk			Recommendations	
		Causes	Cat	Frequency	Consequences	Cat	LOPA?		Safeguards	Cat	IPL?	PFD	Enablers	Value	S	L	R	Frequ...	Tolerance	RRR		
More	Higher Pressure	1. Fire exposure	•EXT •FAC	10 <sup>-1</sup>	1.1. Potential overpressurization of rail car resulting in release of chlorine.	ALL	<input checked="" type="checkbox"/>	1.1.1. Rail cars provided with relief valve	ENG	<input checked="" type="checkbox"/>	10 <sup>-1</sup>	Probability of ignition	10 <sup>-1</sup>	1	4	4	10 <sup>-3</sup>	10 <sup>-5</sup>	10 <sup>-2</sup>	1.1.1. Implement measures to control fire exposure.		
					1.2. Potential rupture of the rail car if the rail car relief valve fails.	ALL	<input type="checkbox"/>	1.2.1. Rail cars insulated	ENG	<input type="checkbox"/>												
	2. High ambient temperature	•EXT •FAC		2.1. Potential increase in pressure. Not likely to approach rated pressure of rail car.	OPR	<input type="checkbox"/>	2.1.1. Rail cars insulated	ENG	<input type="checkbox"/>					5	1	5					:No recommendations	
				2.1.2. Location of rail car minimizes likelihood of exposure.	MGT	<input type="checkbox"/>																
				2.1.3. Pressure indicator, PI-1.	ENG	<input type="checkbox"/>																
Less	Lower Pressure	3. Relief valve RV-25 fails open	EQP		3.1. Potential exposure of personnel and potential offsite impact	PER	<input type="checkbox"/>	3.1.1. Railcar emergency leak patch kit is available on site.	MNT	<input type="checkbox"/>				1	4	4		10 <sup>-5</sup>		3.1.1. Consider conducting a failure modes and effects analysis (FMEA) of a typical pressure relief valve.		
					3.1.2. Pressure indicator, PI-1.	ENG	<input type="checkbox"/>															
					4. Empty rail car	HUM	<input type="checkbox"/>	4.1.1. Rail car is weighed upon receipt	MGT	<input type="checkbox"/>							5	3	9			
5. Sudden change in ambient temperature	•EXT •FAC		5.1. Potential for too low flow to the treatment system	OPR	<input type="checkbox"/>	5.1.1. Rail cars insulated	ENG	<input type="checkbox"/>					5	2	8				:No further recommendations			

Press F1 for Help

EDIT

Complete PHA and LOPA in the same worksheet