

Consequence Summary Report

Workspace: Cisterna mangueira 202311

Study: Cenário 7 e 8 - Mangueira Enchimento

Summary Basis

These tables will only report global values set in the parameters. Values that are modified in the study tree will not be reported. The report is context sensitive, and filters up to the study level. You will need to generate multiple summary reports if you have multiple studies in your workspace.

The results in this report are from the non-CFD calculations only.

Discharge Results (after atmospheric expansion)

Path	Scenario	Weather	Peak Flowrate [kg/s]	Temperature [degC]	Liquid mass fraction in material [fraction]	Droplet diameter [um]	Expanded diameter [m]	Velocity [m/s]	End time of release [s]
Cenário 7 e 8 - Mangueira Enchimento\Atmospheric storage tank	Mangueira - Rot Total	Category 3.5/D	19,6207	17,4102	1	7974,54	0,0762	5,4283	445,096
	Mangueira - 10% Rot - Horizontal	Category 3.5/D	0,210431	17,3953	1	2496,05	0,00590243	9,70289	3600
	Mangueira - 10% Rot - Vertical	Category 3.5/D	0,210431	17,3953	1	2496,05	0,00590243	9,70289	3600



Dispersion Results

Input dispersion parameters

Core averaging time	18,75	s
Flammable averaging time	18,75	s
Toxic averaging time	600	s
Height of interest	0	m

Distance downwind to flammable concentrations

Path	Scenario	Weather	Distance to UFL [m]	Distance to LFL [m]	Distance to LFL fraction [m]
Cenário 7 e 8 - Mangueira Enchimento\Atmospheric storage tank	Mangueira - Rot Total	Category 3.5/D	3,00488	3,47982	13,2217
	Mangueira - 10% Rot - Horizontal	Category 3.5/D	Not reached at height of interest	Not reached at height of interest	Not reached at height of interest
	Mangueira - 10% Rot - Vertical	Category 3.5/D	Not reached at height of interest	Not reached at height of interest	Not reached at height of interest

Jet Fire Results

Distance downwind to defined radiation levels

The reported radiations are defined in the parameters

Path	Scenario	Weather	Flame length [m]	Distance downwind to intensity level 1 (5 kW/m ²) [m]	Distance downwind to intensity level 2 (7 kW/m ²) [m]	Distance downwind to intensity level 3 (12,5 kW/m ²) [m]
Cenário 7 e 8 - Mangueira Enchimento\Atmospheric storage tank	Mangueira - Rot Total	Category 3.5/D	9,37836	12,0775	11,2171	10,4058
	Mangueira - 10% Rot - Horizontal	Category 3.5/D	2,36953	Not reached at height of interest	Not reached at height of interest	Not reached at height of interest
	Mangueira - 10% Rot - Vertical	Category 3.5/D	2,58517	2,56067	Not reached at height of interest	Not reached at height of interest

Early Pool Fire Results

Distance downwind to defined radiation levels

The reported radiations are defined in the parameters

Path	Scenario	Weather	Pool diameter [m]	Distance downwind to intensity level 1 (5 kW/m ²) [m]	Distance downwind to intensity level 2 (7 kW/m ²) [m]	Distance downwind to intensity level 3 (12,5 kW/m ²) [m]
Cenário 7 e 8 - Mangueira Enchimento\Atmospheric storage tank	Mangueira - Rot Total	Category 3.5/D	32,1782	62,2354	55,0189	45,3999
	Mangueira - 10% Rot - Horizontal	Category 3.5/D	3,32082	10,3681	9,50501	8,09379
	Mangueira - 10% Rot - Vertical	Category 3.5/D	3,28099	12,2932	11,4406	10,0398

Late Pool Fire Results

Distance downwind to defined radiation levels

The reported radiations are defined in the parameters

Path	Scenario	Weather	Pool diameter [m]	Distance downwind to intensity level 1 (5 kW/m ²) [m]	Distance downwind to intensity level 2 (7 kW/m ²) [m]	Distance downwind to intensity level 3 (12,5 kW/m ²) [m]
Cenário 7 e 8 - Mangueira Enchimento\Atmospheric storage tank	Mangueira - Rot Total	Category 3.5/D	51,9386	94,2782	83,2397	68,4562
	Mangueira - 10% Rot - Horizontal	Category 3.5/D	13,4166	29,7112	26,3842	22,0421
	Mangueira - 10% Rot - Vertical	Category 3.5/D	13,311	31,5275	28,2236	23,9126

Flash Fire Results

Distance downwind to defined concentrations

The reported LFL and LFL fraction are defined in the respective material property

Path	Scenario	Weather	Distance downwind to LFL [m]	Distance downwind to LFL Fraction [m]
Cenário 7 e 8 - Mangueira Enchimento\Atmospheric storage tank	Mangueira - Rot Total	Category 3.5/D	3,47982	13,2217
	Mangueira - 10% Rot - Horizontal	Category 3.5/D		
	Mangueira - 10% Rot - Vertical	Category 3.5/D		

Maximum distance to LFL fraction at any height

Path	Scenario	Weather	Max flash fire distance [m]	Height of the max flash fire distance [m]	Time [s]
Cenário 7 e 8 - Mangueira Enchimento\Atmospheric storage tank	Mangueira - Rot Total	Category 3.5/D	12,9307	0	434,462
	Mangueira - 10% Rot - Horizontal	Category 3.5/D	3,02793	0,711776	7,51456
	Mangueira - 10% Rot - Vertical	Category 3.5/D	4,02323	2,11545	7,51517

Explosion Results

Explosion scenarios for worst-case maximum downwind distance to defined overpressures.

The reported overpressures are defined in the explosion parameters

Path	Scenario	Weather	Overpressure level [bar]	Maximum distance [m]	Diameter [m]
Cenário 7 e 8 - Mangueira Enchimento\Atmospheric storage tank	Mangueira - Rot Total	Category 3.5/D	0,03	No hazard	0
			0,14	No hazard	0
			0,3	No hazard	0

Supplementary data for worst-case explosion scenarios

Path	Scenario	Weather	Overpressure level [bar]	Explosion flammable mass [kg]	Ignition time [s]	Ignition source [m]	Cloud centre [m]	Explosion centre [m]
Cenário 7 e 8 - Mangueira Enchimento\Atmospheric storage tank	Mangueira - Rot Total	Category 3.5/D	0,03	0	0	No hazard	No hazard	0
			0,14	0	0	No hazard	No hazard	0
			0,3	0	0	No hazard	No hazard	0