

# COMMENTARY REPORT

Study Folder: TOP EVENT 10-14

Unique Audit Number:

157

PHAST v6.00



## TOP EVENT 10-14



### Methanol spill out

#### Disk rupture opening

##### Base Case

##### Data

	<b>Weather:</b>	<b>Category 2/F</b>	
	<b><u>Speed:</u></b>	<b><u>2,00 m/s</u></b>	<b><u>Stability:</u></b> <b><u>F</u></b>

TOP EVENT 10-14\Methanol spill out\Disk rupture opening

#### Dispersion Commentary

##### ----- Dispersion Results

Quasi-Instantaneous transitions enabled (duration adjustment not applied)  
Start of new release segment  
Release velocity set to minimum 0.1 m/s  
Expansion zone is 0.02995 m  
Dispersion starts as momentum jet before touchdown  
Release segment of duration 3600 s  
Cloud center has reached the UFL concentration 0.36 fraction at distance 0.3587 m and time 0.8812 s  
Cloud center has reached the LFL concentration 0.073 fraction at distance 2.157 m and time 2.847 s  
Cloud center has reached the LFL fractional concentration 0.0365 fraction at distance 4.026 m and time 4.429 s  
Cloud center has reached the user-specified distance of interest 10 m at time 8.75 s and concentration 0.01088 fraction  
Cloud center has reached the user-specified distance of interest 25 m at time 17.52 s and concentration 0.003417 fraction  
Dispersion modeled as passive plume/cloud at distance 47.01 m and time 28.61 s  
Cloud center has reached the user-specified distance of interest 50 m at time 29.96 s and concentration 0.001305 fraction  
Cloud edge has reached the mixing layer at distance 1899 m and time 461.5 s  
Cloud center has reached the mixing layer at distance 4699 m and time 922.5 s  
Cloud center has reached the user-specified concentration 1E-6 fraction at distance 1.881E4 m and time 3062 s

#### Info

##### ----- Late Explosion Category 2/F Results

No late explosions are predicted

#### Information

##### ----- Discharge Category 2/F Results

Running model Pipe/Orifice ...

##### ----- Dispersion Category 2/F Results

Dispersion will end at either a concentration of 1 ppm or a distance of 50 m  
Cloud calculations will use concentration 1 ppm and Averaging Time 18.75 s (Flammable)  
UDM results file read. 214 records, 1 segment headers, 212 dispersion results  
Dispersion results post-processing completed OK

#### Warnings

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## Warnings

----- Building Data Category 2/F Results

INBU 1004: Material volumetric rate 455.6 m<sup>3</sup>/hr exceeds ventilation rate. Damage to the building allows higher outdoors release rate



Weather:

Category 5/D

Speed:

5.00 m/s

Stability:

D

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## Dispersion Commentary

----- Dispersion Results

Quasi-Instantaneous transitions enabled (duration adjustment not applied)

Start of new release segment

Release velocity set to minimum 0.1 m/s

Expansion zone is 0.02995 m

Dispersion starts as momentum jet before touchdown

Release segment of duration 3600 s

Cloud center has reached the UFL concentration 0.36 fraction at distance 0.4875 m and time 0.3509 s

Cloud center has reached the LFL concentration 0.073 fraction at distance 3.173 m and time 1.217 s

Cloud center has reached the LFL fractional concentration 0.0365 fraction at distance 5.133 m and time 1.769 s

Dispersion modeled as passive plume/cloud at distance 8.535 m and time 2.685 s

Cloud center has reached the user-specified distance of interest 10 m at time 3.068 s and concentration 0.01282 fraction

Cloud edge has touched down at distance 18.13 m and time 5.132 s

Cloud center has reached the user-specified distance of interest 25 m at time 6.82 s and concentration 0.004531 fraction

Cloud center has reached the user-specified distance of interest 50 m at time 12.73 s and concentration 0.002071 fraction

Cloud center has reached the user-specified concentration 1E-6 fraction at distance 5747 m and time 821.9 s

## Info

----- Late Explosion Category 5/D Results

No late explosions are predicted

## Information

----- Discharge Category 5/D Results

Running model Pipe/Orifice ...

----- Dispersion Category 5/D Results

Dispersion will end at either a concentration of 1 ppm or a distance of 50 m

Cloud calculations will use concentration 1 ppm and Averaging Time 18.75 s (Flammable)

UDM results file read. 88 records, 1 segment headers, 86 dispersion results

Dispersion results post-processing completed OK

## Warnings

----- Building Data Category 5/D Results

INBU 1004: Material volumetric rate 455.6 m<sup>3</sup>/hr exceeds ventilation rate. Damage to the

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## Warnings

building allows higher outdoors release rate