



*Time: April 3, 2012 1058 hours ST (user specified)*

*Chemical Name: METHANE*

*Wind: 2.8 meters/second from 315° true at 10 meters*

***THREAT ZONE:***

*Threat Modeled: Flammable Area of Vapor Cloud*

*Model Run: Gaussian*

*Red : 39 meters --- (25000 ppm)*

*Note: Threat zone was not drawn because effects of near-field patchiness make dispersion predictions less reliable for short distances.*

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**SITE DATA:**

**Location:** MORA, PORTUGAL  
**Building Air Exchanges Per Hour:** 0.30 (unsheltered double storied)  
**Time:** April 3, 2012 1058 hours ST (user specified)

**CHEMICAL DATA:**

**Chemical Name:** METHANE **Molecular Weight:** 16.04 g/mol  
**PAC-1:** 2900 ppm **PAC-2:** 2900 ppm **PAC-3:** 17000 ppm  
**LEL:** 50000 ppm **UEL:** 150000 ppm  
**Ambient Boiling Point:** -161.6° C  
**Vapor Pressure at Ambient Temperature:** greater than 1 atm  
**Ambient Saturation Concentration:** 1,000,000 ppm or 100.0%

**ATMOSPHERIC DATA: (MANUAL INPUT OF DATA)**

**Wind:** 2.8 meters/second from 315° true at 10 meters  
**Ground Roughness:** open country **Cloud Cover:** 5 tenths  
**Air Temperature:** 22° C **Stability Class:** B  
**No Inversion Height** **Relative Humidity:** 25%

**SOURCE STRENGTH:**

**Flammable gas escaping from pipe (not burning)**  
**Pipe Diameter:** 9 centimeters **Pipe Length:** 40 meters  
**Unbroken end of the pipe is connected to an infinite source**  
**Pipe Roughness:** smooth **Hole Area:** 63.6 sq cm  
**Pipe Press:** 4 atmospheres **Pipe Temperature:** 10° C  
**Release Duration:** ALOHA limited the duration to 1 hour  
**Max Average Sustained Release Rate:** 110 kilograms/min  
(averaged over a minute or more)  
**Total Amount Released:** 6,578 kilograms

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