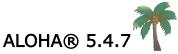
Model Run: Heavy Gas

Red : 18 meters --- (0.14 atmospheres) Orange: 37 meters --- (0.05 atmospheres)



SITE DATA: Location: AVENIDA DA FABRICA 298, PENA, PORTUGAL Building Air Exchanges Per Hour: 0.38 (sheltered double storied) Time: February 12, 2025 1804 hours ST (user specified) CHEMICAL DATA: Chemical Name: ETHYLENE OXIDE CAS Number: 75-21-8 Molecular Weight: 44.05 g/mol AEGL-1 (60 min): N/A AEGL-2 (60 min): 45 ppm AEGL-3 (60 min): 200 ppm IDLH: 800 ppm LEL: 30000 ppm UEL: 1000000 ppm Carcinogenic risk - see CAMEO Chemicals Ambient Boiling Point: 9.8° 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: 3.3 meters/second from w at 3 meters Ground Roughness: urban or forest Cloud Cover: 5 tenths Air Temperature: 15° C Stability Class: D No Inversion Height Relative Humidity: 78% SOURCE STRENGTH: Leak from short pipe or valve in horizontal cylindrical tank Flammable chemical escaping from tank (not burning) Tank Diameter: 0.77 meters Tank Length: 2 meters Tank Volume: 930 liters Tank contains liquid Internal Temperature: 15° C Chemical Mass in Tank: 700 kilograms Tank is 85% full Circular Opening Diameter: 0.1 inches Opening is 38.5 centimeters from tank bottom Release Duration: ALOHA limited the duration to 1 hour Max Average Sustained Release Rate: 486 grams/min (averaged over a minute or more) Total Amount Released: 29.2 kilograms Note: The chemical escaped as a mixture of gas and aerosol (two phase flow). THREAT ZONE: Threat Modeled: Overpressure (blast force) from vapor cloud explosion Type of Ignition: ignited by spark or flame Level of Congestion: uncongested