

ABERDEEN GAS DEPOT

List of relevant parameters for SAFETI

Flammable Parameters

Height for calculation of flammable effects	0	m
Flammable result grid step in X-direction	10	m
LFL fraction to finish	0.5	
Flammable angle of inclination	0	deg
Flammable inclination	Variable	
Flammable mass calculation method	Mass between LFL and UFL	
Flammable Base averaging time	18.75	s
Radiation level for Jet/Pool Fire Risk	35	kW/m ²
Cut Off Fraction	0.001	fraction
UFL Multiple	1	
Cut Off Time for Short Continuous Releases	20	s
Observer type radiation modelling flag	Planar	
Probit A Value	-36.38	
Probit B Value	2.56	
Probit N Value	1.333	
Height for reports	Centreline Height	
Angle of orientation	0	deg
Relative tolerance for radiation calculations	0.01	fraction
Number of Lethality Ellipses	5.00	
Radiation Ellipse Interpolation	Probit	
Minimum Probability Of Death	0.01	fraction

General Parameters

Maximum release duration	3600	s
Height for concentration output	0	m
Rotation	0	deg
Minimum Z	0	m
Maximum Z	1	m

Toxic Parameters

Toxics: minimum probability of death	0.001	
Toxics: height for calculation of effects	0	m
Toxics: results grid step in Y-direction	2.5	m
Toxics: results grid step in X-direction	25	m
Multi-comp. toxic calc. method	Mixture Probit	
Toxic Averaging Time (New Parameter)	600	s
Probit Calculation Method	Use Probit	
Building Exchange Rate	4	/hr
Tail Time	1800	s
Indoor Calculations	Unselected	
Wind Dependent Exchange Rate	Case Specified	

Weather Parameters

Atmospheric pressure	1.013	bar
Atmospheric molecular weight	28.97	
Atmospheric specific heat at constant pressure kJ/kg.degK	1.004	
Wind speed reference height (m)	10	m
Temperature reference height (m)	0	m
Cut-off height for wind speed profile (m)	1	m
Wind speed profile	Power Law	
Atmospheric Temperature and Pressure Profile	Temp.Logarithmic; Pres.Linear	
Atmospheric temperature	25	degC
Relative humidity	0.8	fraction
Surface Roughness Parameter	0.1	
Surface Roughness Length	183.2	mm
Roughness or Parameter	Parameter	

Dispersing surface temperature	9.85	degC
Default surface temperature of bund	9.85	degC
Solar radiation flux	0.5	kW/m2
Building Exchange Rate	4	/hr
Tail Time	1800	s
Surface Type	User-defined	
Mixing layer height for Pasquil Stability A	1300	m
Mixing layer height for Pasquil Stability A/B	1080	m
Mixing layer height for Pasquil Stability B	920	m
Mixing layer height for Pasquil Stability B/C	880	m
Mixing layer height for Pasquil Stability C	840	m
Mixing layer height for Pasquil Stability C/D	820	m
Mixing layer height for Pasquil Stability D	800	m
Mixing layer height for Pasquil Stability E	400	m
Mixing layer height for Pasquil Stability F	100	m
Mixing layer height for Pasquil Stability G	100	m

General Risk Parameters

Use Free Field Modelling	No	
Distance to Site Boundary	0	m
Include Effects of Late Pool Fire	No	
Minimum Case Frequency	1e-012	
Minimum Event Probability	1e-012	
Fraction of Population Outdoors for Societal Risk	0.05	fraction
Fraction of Population Outdoors for Individual Risk	1	fraction
Population Omega Factor	0.000168	
Maximum Number of Subsquares across Ellipse	10.00	
Maximum Number of Subdivisions per Square	5.00	
Factor for Toxic F-N Spread	2	
Set Calculation Grid Size	No	
Grid Bounds Minimum X (input)	-1000	m
Grid Bounds Maximum X (input)	1000	m
Grid Bounds Minimum Y (input)	-1000	m
Grid Bounds Maximum Y (input)	1000	m
Grid Calculation Method	Number of cells	
MPACT cell size	10	m
Maximum number of MPACT cells	40,000.00	
Aversion Index	1.2	
Indoor Population Omega Factor	0.5	
Number of wind subdivisions per sector	2.00	
Method for handling Indoor/Outdoor risk	Indoor and outdoor risk calculations	
Inter-ellipse interpolation method	Weighted	
Heavy Explosion Damage (Outdoors)	1	fraction
Heavy Explosion Damage (Indoors)	1	fraction
Light Explosion Damage (Outdoors)	1	fraction
Light Explosion Damage (Indoors)	1	fraction
Flash Fire (Outdoors)	1	fraction
Flash Fire (Indoors)	0.5	fraction
Fireball Societal Radiation Criteria Zone (Outdoors)	1	fraction
Fireball Societal Radiation Criteria Zone (Indoors)	0.5	fraction
Fireball Individual Radiation Criteria Zone (Outdoors)	1	fraction
Fireball Individual Radiation Criteria Zone (Indoors)	0.5	fraction
Fireball Societal Flammable Probit Zone (Outdoors)	1	fraction
Fireball Societal Flammable Probit Zone (Indoors)	1	fraction
Fireball Individual Flammable Probit Zone (Outdoors)	1	fraction
Fireball Individual Flammable Probit Zone (Indoors)	1	fraction
Jet Fire Societal Radiation Criteria Zone (Outdoors)	1	fraction
Jet Fire Societal Radiation Criteria Zone (Indoors)	0.5	fraction
Jet Fire Individual Radiation Criteria Zone (Outdoors)	1	fraction
Jet Fire Individual Radiation Criteria Zone (Indoors)	0.5	fraction

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Jet Fire Societal Flammable Probit Zone (Indoors)	1 fraction
Jet Fire Individual Flammable Probit Zone (Outdoors)	1 fraction
Jet Fire Individual Flammable Probit Zone (Indoors)	1 fraction
Toxics (Outdoors)	1 fraction
Toxics (Indoors)	1 fraction

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