

Description

Heading: DT2

Description: Desert Tortoise DT2

Source Condition

Source Type: Continuous
Source Location: (0,0,0.79)m
Release Type: Momentum Jet
Discharge Coefficient: 1
Orifice Radius: 0.04725m
Angle From Horizontal: 0deg
Angle Form North: 90deg
Release Rate: 117kg/s
Duration: 255s
Using Finite Duration Model: Yes

Source Composition

Phase: Two-Phase
Substance: Ammonia (SRD Databank)
Liquid Fraction: 1
Temperature: 293.25K
Contaminant Mass Fraction: 1
Pressure: 1.12e+06Pa
Rainout Fraction: 0

Weather Conditions

Weather Scheme: Monin-Obukhov
Roughness Length: 0.003m
Wind Reference Height: 2m
Wind Angle From North: 270deg
Relative Humidity: 0.175
Temperature: 303.55K
Pressure: 91000Pa
Using User Input Mixing Height: Yes
User Input Mixing Height: 1000m
Inverse Obukhov Length: 0.01056/m
Friction Velocity: 0.339m/s

Flammable Targets

Flammable Limits Input By User: No
Lower Flammable Limit: 0%
Upper Flammable Limit: 0%
Target LFL Fractions: 1

Toxic Targets

Indoors Ventilation Rate: 0 air changes per hour
Indoors Lag Time: 0s
Maximum Exposure Duration: 80s
Use Time Averaging: Yes
Averaging Time: 160s
Toxic Dose Fraction Method: Method 1
Toxic Dose Exponents: Ammonia: 1
Outdoor Conc Criteria #1: 10ppm Ammonia

Expanded Source Conditions

Diameter: 0.704011m
Velocity: 86.119m/s
Density: 3.49009kg/m³
Vapour Fraction: 0.223904
Richardson Number: 0.340203

Messages:

Running Model

At 50.7659m downstream from the source the cloud centreline has reached ground-level

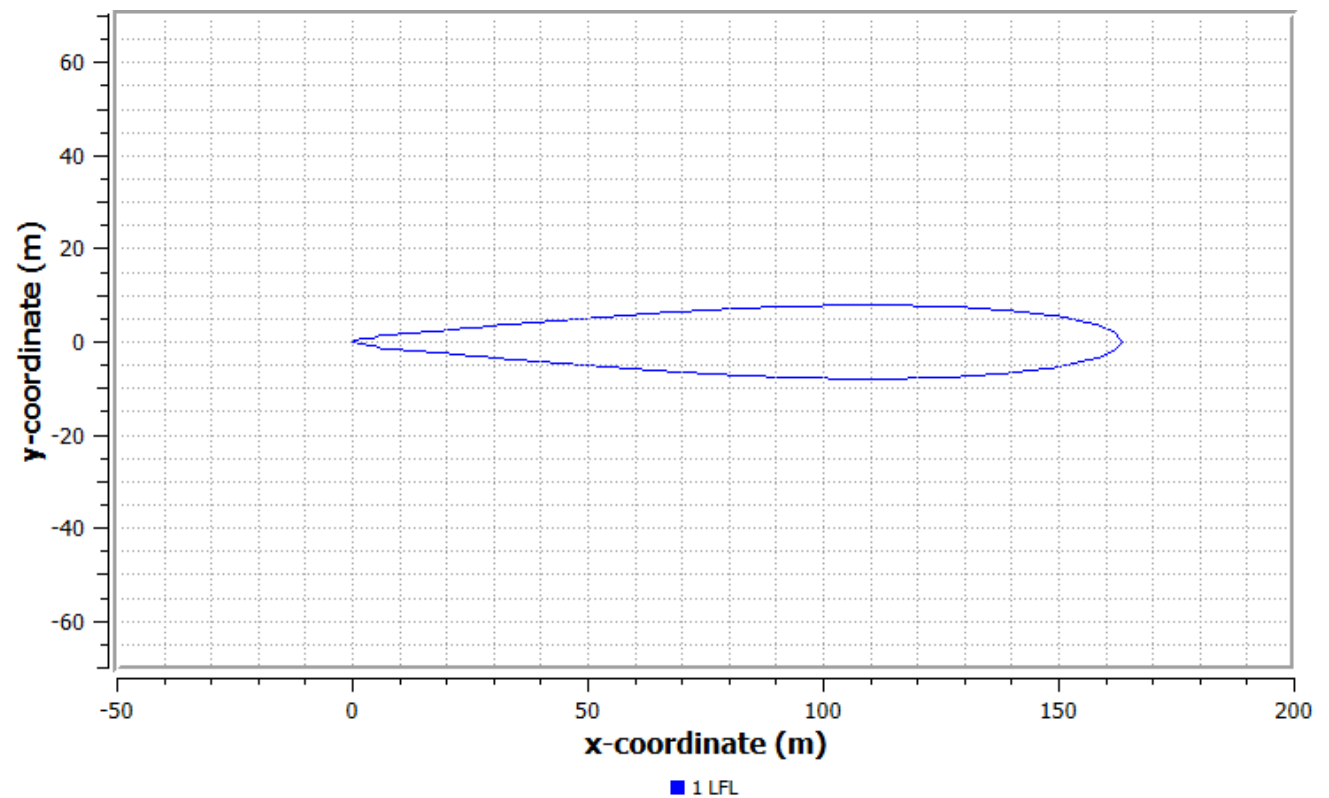
At 631.873m downstream from the source there is no liquid remaining in the cloud in phase 0

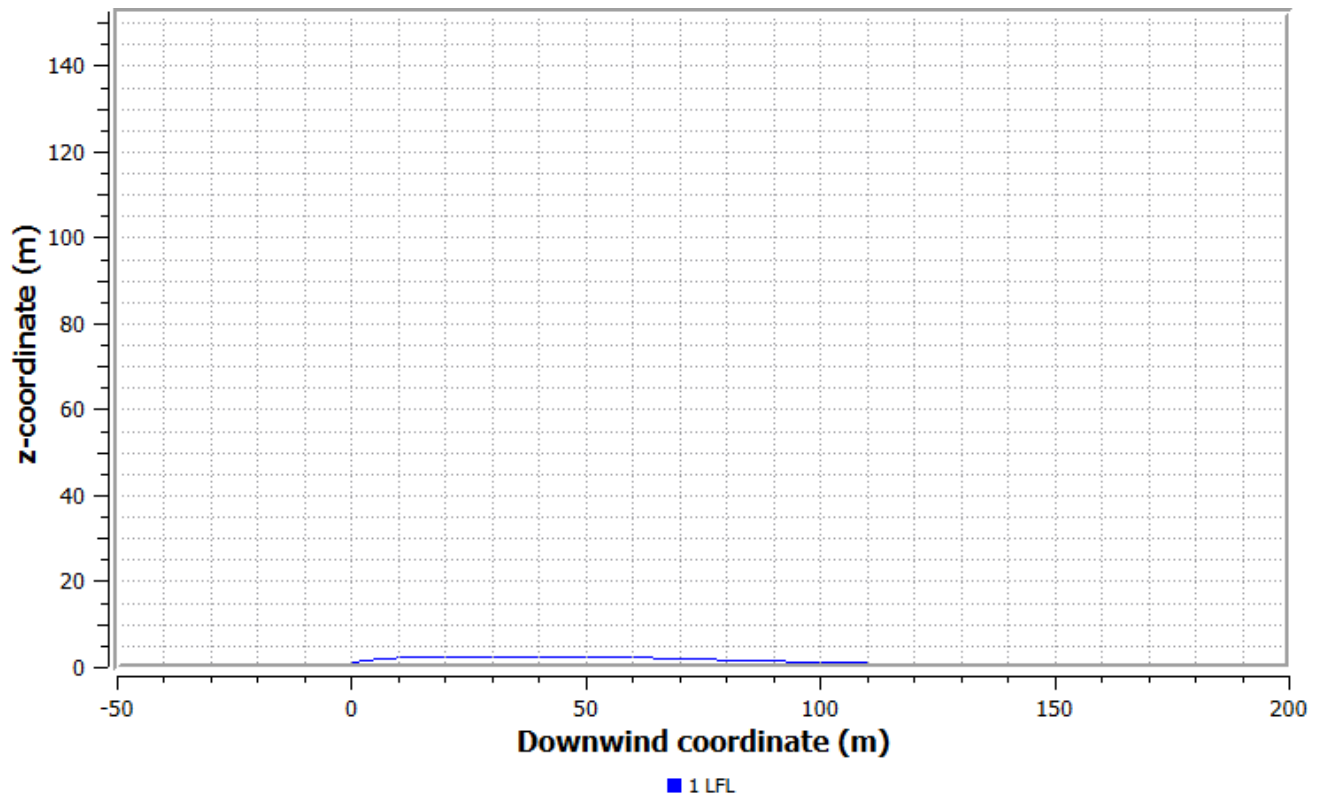
At a downstream distance of 70553m and a centroid height of 100.005m the cloud centroid has left the Surface Layer and has now entered the z-less Scaling Layer

General Results

Worst Case Time: Yes

Flammable Results





Worst Case Time: Yes

Worst Case Height: Yes

Flammable Volume: 1882.89m³

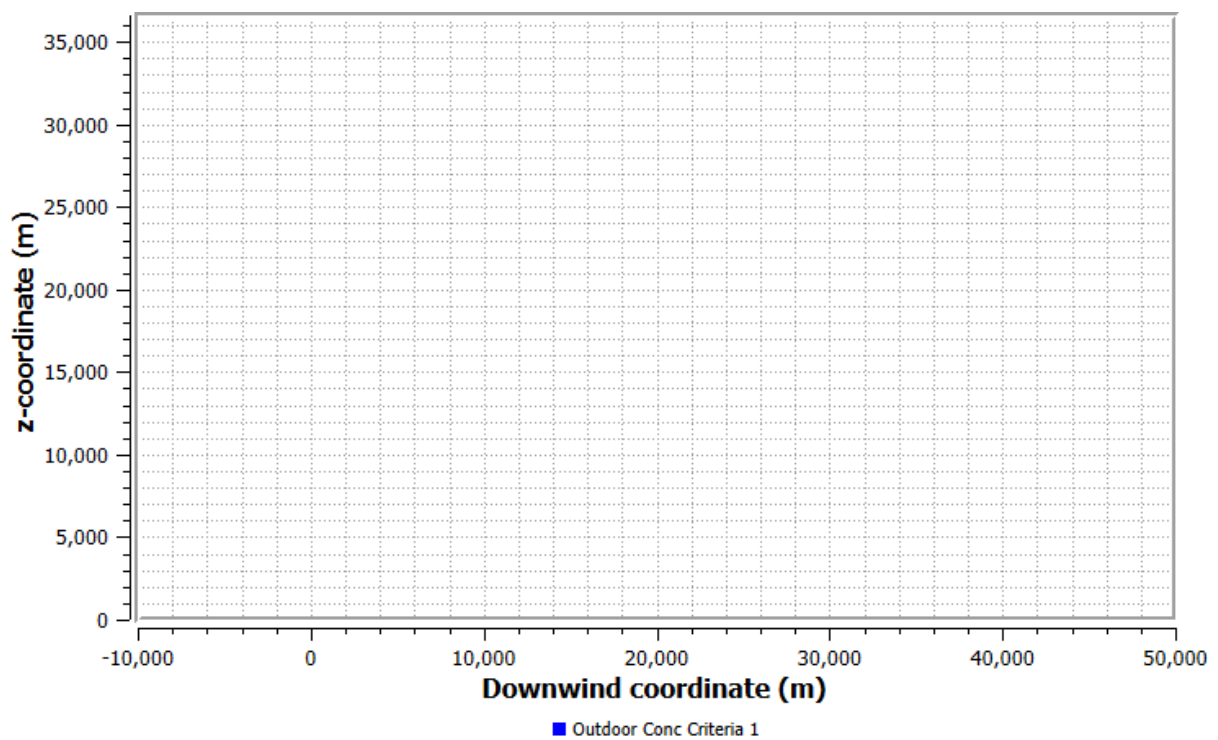
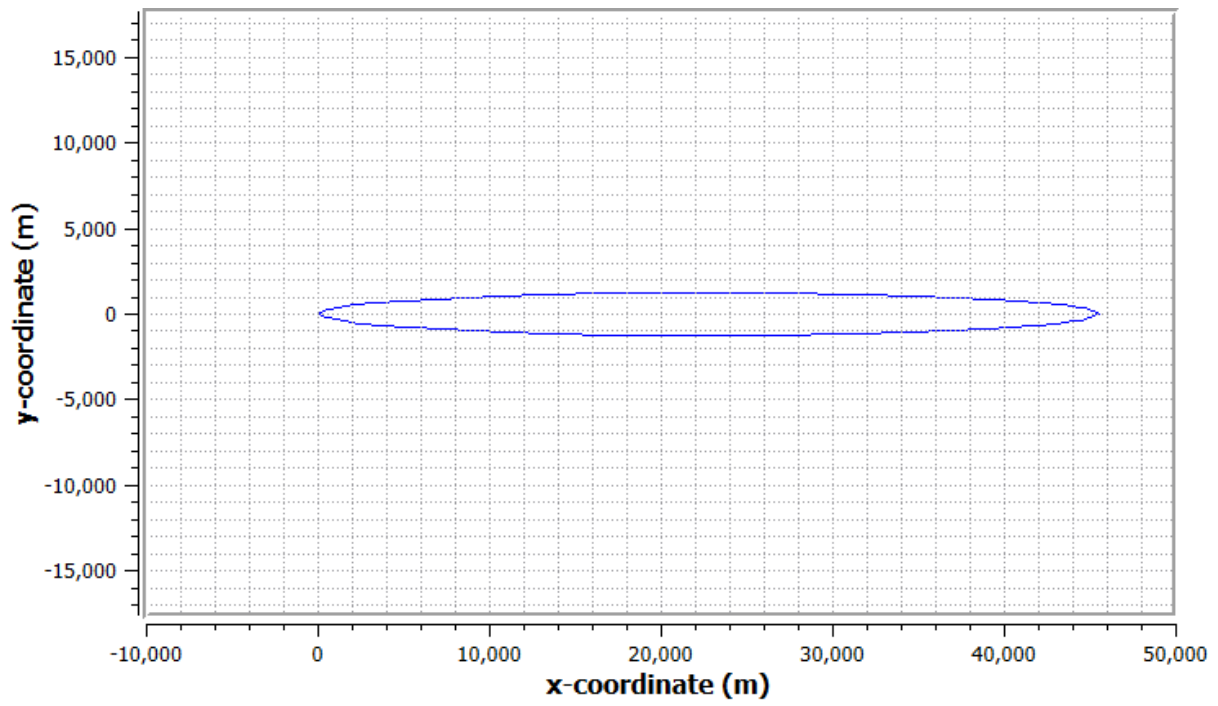
Excluding UFL Region: No

Flammable Mass: 245.385kg

Excluding UFL Region: No

	Fraction Of LFL Distance Upstream (m)	Distance Downstream (m)	Max. Half Width (m)	Distance to Max. Half Width (m)
1	0.230505	163.567	7.88675	109.696

Toxic Results



Worst Case Time: Yes

Worst Case Height: Yes

Criteria Description:	Distance Upstream (m)	Distance Downstream (m)	Max. Half Width (m)	Distance to Max. Half Width (m)
Outdoor Concentration Level 1	0.455165	45483	1286.51	22614.6