Description

Heading: DT4
Description: Desert Tortoise DT4

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:	108kg/s
Duration:	381s
Using Finite Duration Model:	Yes

Source Composition

Phase:	Two-Phase
Substance:	Ammonia (SRD Databank)
Liquid Fraction:	1
Temperature:	297.25K
Contaminant Mass Fraction:	1
Pressure:	1.18e+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:	0.213
Temperature:	305.55K
Pressure:	90300Pa
Using User Input Mixing Height:	Yes
User Input Mixing Height:	1000m
Inverse Obukhov Length	0.02212/m
Friction Velocity:	0.286m/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:	300s
Toxic Dose Fraction Method:	Method 1
Toxic Dose Exponents:	Ammonia: 1
Outdoor Conc Criteria #1:	10ppm Ammonia

Expanded Source Conditions

Diameter:	0.67802m
Velocity:	93.3221m/s
Density:	3.20527kg/m3
Vapour Fraction:	0.242179
Richardson Number:	0.244852

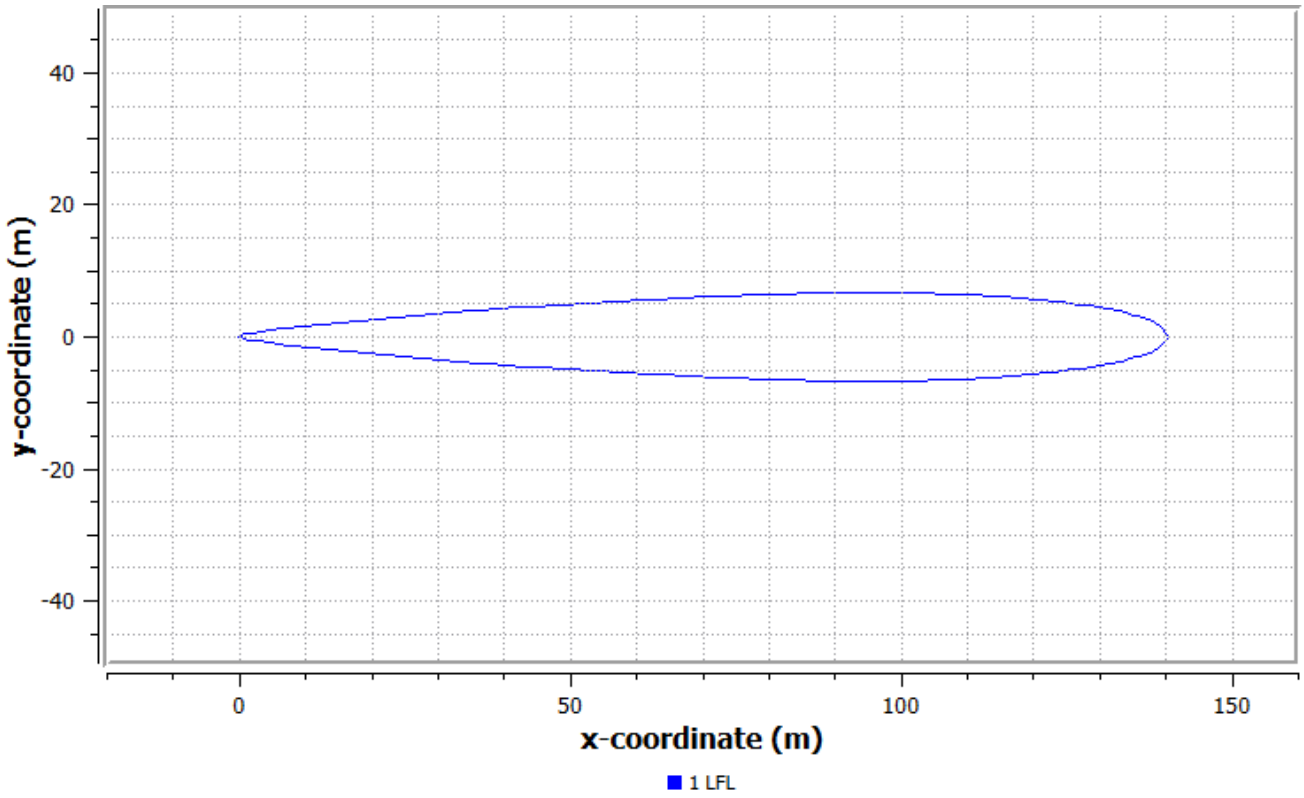
Messages:

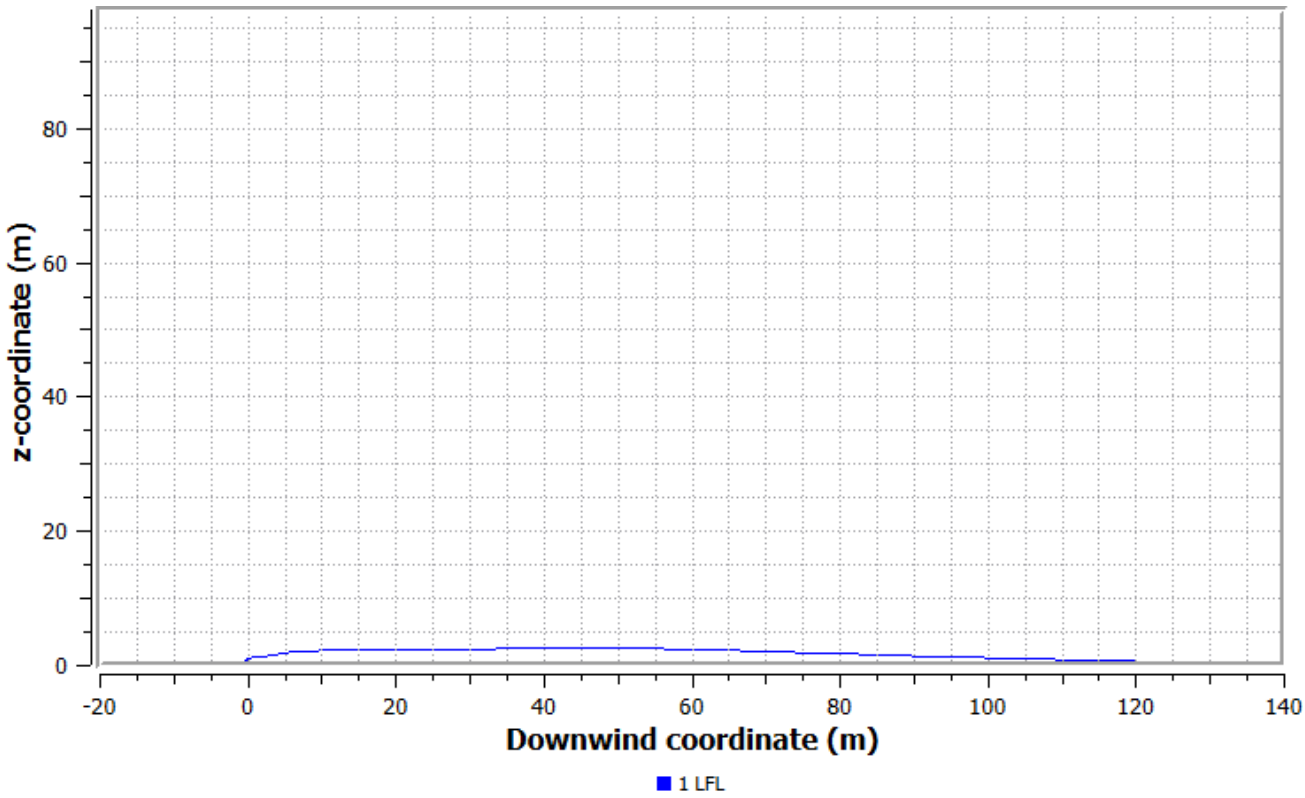
Running Model
For the given inputs the atmospheric boundary layer is predicted to be a pure Intermittency Layer. The physics of this regime is not well-understood and so DRIFT will instead assume that the cloud remains within the surface layer for the duration of this run. If this is problematic, try either reducing the mixing height or selecting a less stable atmosphere.
At 51.1158m downstream from the source the cloud centreline has reached ground-level
At 717.679m downstream from the source there is no liquid remaining in the cloud in phase 0

General Results

Worst Case Time: Yes

Flammable Results





Worst Case Time: Yes

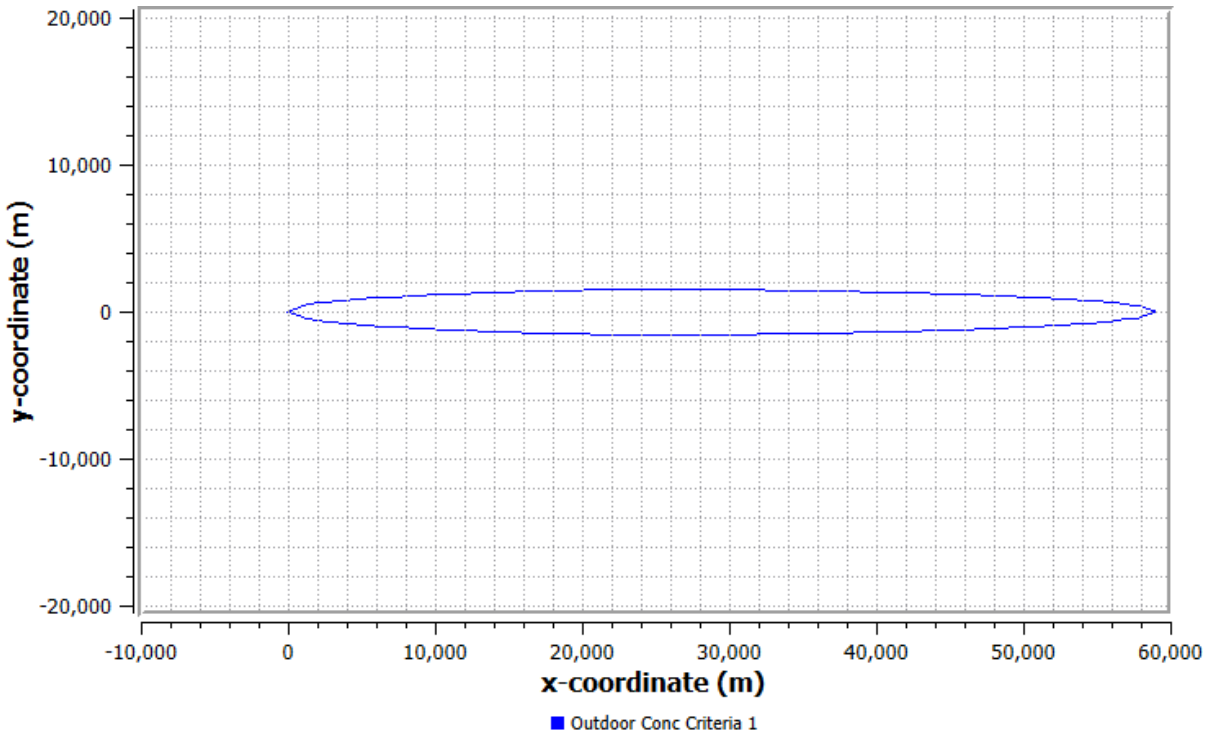
Worst Case Height: Yes

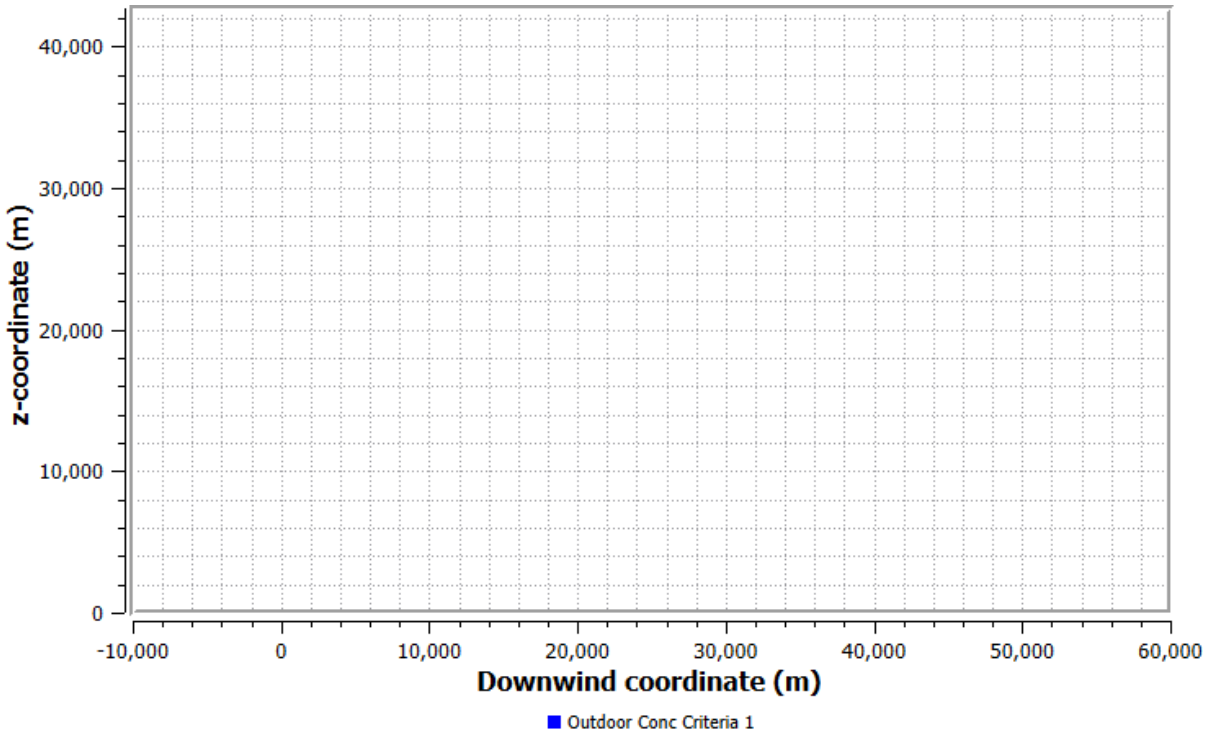
Flammable Volume: 1638.91m3
Excluding UFL Region: No

Flammable Mass: 207.371kg
Excluding UFL Region: No

Fraction Of LFL	Distance Upstream (m)	Distance Downstream (m)	Max. Half Width (m)	Distance to Max. Half Width (m)
1	0.187766	140.488	6.69191	94.5106

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	0.352514	58909.5	1556.72	26693.6