

ProjectDetails

Project Name	Parry Quarry
Client	Mold Investments
Model	c:\modelling files\parrys quarry\parrys quarry_v1.gss
Model Date	17/07/2019 15:26:17
Comments	
Start Year	2020
Operation Period	8
Simulation Period	150
Iterations	250

Waste Composition

Year	Composition
2020	2013-2020 Low C C&I
<i>Newspapers</i>	
Water (%)	SINGLE(30.0)
Cellulose (%)	SINGLE(48.5)
Hemi-Cellulose (%)	SINGLE(9.0)
Decomposition (%)	SINGLE(35.0)
<i>Magazines</i>	
Water (%)	SINGLE(30.0)
Cellulose (%)	SINGLE(42.3)
Hemi-Cellulose (%)	SINGLE(9.4)
Decomposition (%)	SINGLE(46.0)
<i>Other paper</i>	
Domestic	SINGLE(10.5)
Civic Amenity	SINGLE(3.3)
Commercial	SINGLE(5.0)
Industrial	SINGLE(5.0)
Water (%)	SINGLE(30.0)
Cellulose (%)	SINGLE(87.4)
Hemi-Cellulose (%)	SINGLE(8.4)
Decomposition (%)	SINGLE(98.0)
<i>Liquid cartons</i>	
Water (%)	SINGLE(30.0)
Cellulose (%)	SINGLE(57.3)
Hemi-Cellulose (%)	SINGLE(9.9)
Decomposition (%)	SINGLE(64.0)
<i>Card packaging</i>	
Water (%)	SINGLE(30.0)
Cellulose (%)	SINGLE(57.3)
Hemi-Cellulose (%)	SINGLE(9.9)
Decomposition (%)	SINGLE(64.0)
<i>Other card</i>	
Water (%)	SINGLE(30.0)
Cellulose (%)	SINGLE(57.3)
Hemi-Cellulose (%)	SINGLE(9.9)
Decomposition (%)	SINGLE(64.0)
<i>Wood</i>	
Domestic	SINGLE(1.4)
Civic Amenity	SINGLE(11.2)
Commercial	SINGLE(3.3)
Industrial	SINGLE(5.0)
Water (%)	SINGLE(20.0)
Cellulose (%)	SINGLE(21.0)
Hemi-Cellulose (%)	SINGLE(11.0)
Decomposition (%)	SINGLE(75.0)
<i>Textiles</i>	
Domestic	SINGLE(0.9)
Civic Amenity	SINGLE(2.3)
Commercial	SINGLE(1.1)
Industrial	SINGLE(0.3)
Water (%)	SINGLE(25.0)
Cellulose (%)	SINGLE(20.0)
Hemi-Cellulose (%)	SINGLE(20.0)
Decomposition (%)	SINGLE(50.0)
<i>Disposable nappies</i>	
Domestic	SINGLE(1.2)
Civic Amenity	SINGLE(2.9)
Water (%)	SINGLE(20.0)
Cellulose (%)	SINGLE(25.0)
Hemi-Cellulose (%)	SINGLE(25.0)
Decomposition (%)	SINGLE(50.0)
<i>Other misc. combustibles</i>	
Domestic	SINGLE(3.5)
Civic Amenity	SINGLE(4.2)
Commercial	SINGLE(5.0)
Industrial	SINGLE(5.0)
User Defined 1	SINGLE(10.0)
Water (%)	SINGLE(20.0)
Cellulose (%)	SINGLE(25.0)
Hemi-Cellulose (%)	SINGLE(25.0)
Decomposition (%)	SINGLE(50.0)
<i>Garden waste</i>	
Domestic	SINGLE(6.4)
Civic Amenity	SINGLE(32.1)
Water (%)	SINGLE(65.0)

Cellulose (%)	SINGLE(25.7)
Hemi-Cellulose (%)	SINGLE(13.0)
Decomposition (%)	SINGLE(62.0)
<i>Other putrescible</i>	
Domestic	SINGLE(8.9)
Civic Amenity	SINGLE(14.8)
Commercial	SINGLE(5.0)
Industrial	SINGLE(5.0)
Water (%)	SINGLE(65.0)
Cellulose (%)	SINGLE(55.4)
Hemi-Cellulose (%)	SINGLE(7.2)
Decomposition (%)	SINGLE(76.0)
<i>10mm fines</i>	
Domestic	SINGLE(2.6)
Civic Amenity	SINGLE(1.2)
Commercial	SINGLE(1.9)
Industrial	SINGLE(0.5)
Water (%)	SINGLE(40.0)
Cellulose (%)	SINGLE(25.0)
Hemi-Cellulose (%)	SINGLE(25.0)
Decomposition (%)	SINGLE(50.0)
<i>Sewage sludge</i>	
Sewage Sludge	SINGLE(100.0)
Water (%)	SINGLE(70.0)
Cellulose (%)	SINGLE(14.0)
Hemi-Cellulose (%)	SINGLE(14.0)
Decomposition (%)	SINGLE(75.0)
<i>Composted organic material</i>	
Composted Organic Material	SINGLE(100.0)
Water (%)	SINGLE(30.0)
Cellulose (%)	UNIFORM(7.47, 9.59)
Hemi-Cellulose (%)	UNIFORM(7.47, 9.59)
Decomposition (%)	SINGLE(57.0)
<i>Incinerator ash</i>	
Commercial	SINGLE(0.2)
Industrial	SINGLE(25.5)
Incinerator Ash	SINGLE(100.0)
Water (%)	SINGLE(30.0)
Cellulose (%)	TRIANGULAR(0.5, 0.7, 1.5)
Hemi-Cellulose (%)	TRIANGULAR(0.5, 0.7, 1.5)
Decomposition (%)	SINGLE(57.0)
<i>Non degradable</i>	
Domestic	SINGLE(64.6)
Civic Amenity	SINGLE(28.0)
Commercial	SINGLE(78.5)
Industrial	SINGLE(53.7)
Inert	SINGLE(100.0)
User Defined 1	SINGLE(90.0)
Water (%)	SINGLE(0.0)
Cellulose (%)	SINGLE(0.0)
Hemi-Cellulose (%)	SINGLE(0.0)
Decomposition (%)	SINGLE(0.0)
<i>Calcium Sulphate (%)</i>	
<i>Iron (%)</i>	
2021	2013-2020 Low C C&I
2022	2013-2020 Low C C&I
2023	2013-2020 Low C C&I
2024	2013-2020 Low C C&I
2025	2020+ Low C C&I
<i>Newspapers</i>	
Water (%)	SINGLE(30.0)
Cellulose (%)	SINGLE(48.5)
Hemi-Cellulose (%)	SINGLE(9.0)
Decomposition (%)	SINGLE(35.0)
<i>Magazines</i>	
Water (%)	SINGLE(30.0)
Cellulose (%)	SINGLE(42.3)
Hemi-Cellulose (%)	SINGLE(9.4)
Decomposition (%)	SINGLE(46.0)
<i>Other paper</i>	
Domestic	SINGLE(7.4)
Civic Amenity	SINGLE(3.3)
Commercial	SINGLE(5.0)
Industrial	SINGLE(5.0)
Water (%)	SINGLE(30.0)
Cellulose (%)	SINGLE(87.4)
Hemi-Cellulose (%)	SINGLE(8.4)
Decomposition (%)	SINGLE(98.0)
<i>Liquid cartons</i>	
Water (%)	SINGLE(30.0)
Cellulose (%)	SINGLE(57.3)
Hemi-Cellulose (%)	SINGLE(9.9)
Decomposition (%)	SINGLE(64.0)
<i>Card packaging</i>	
Water (%)	SINGLE(30.0)
Cellulose (%)	SINGLE(57.3)
Hemi-Cellulose (%)	SINGLE(9.9)
Decomposition (%)	SINGLE(64.0)

<i>Other card</i>	
Water (%)	SINGLE(30.0)
Cellulose (%)	SINGLE(57.3)
Hemi-Cellulose (%)	SINGLE(9.9)
Decomposition (%)	SINGLE(64.0)
<i>Wood</i>	
Domestic	SINGLE(1.0)
Civic Amenity	SINGLE(11.2)
Commercial	SINGLE(3.3)
Industrial	SINGLE(5.0)
Water (%)	SINGLE(20.0)
Cellulose (%)	SINGLE(21.0)
Hemi-Cellulose (%)	SINGLE(11.0)
Decomposition (%)	SINGLE(75.0)
<i>Textiles</i>	
Domestic	SINGLE(0.6)
Civic Amenity	SINGLE(2.3)
Commercial	SINGLE(1.1)
Industrial	SINGLE(0.3)
Water (%)	SINGLE(25.0)
Cellulose (%)	SINGLE(20.0)
Hemi-Cellulose (%)	SINGLE(20.0)
Decomposition (%)	SINGLE(50.0)
<i>Disposable nappies</i>	
Domestic	SINGLE(0.8)
Civic Amenity	SINGLE(2.9)
Water (%)	SINGLE(20.0)
Cellulose (%)	SINGLE(25.0)
Hemi-Cellulose (%)	SINGLE(25.0)
Decomposition (%)	SINGLE(50.0)
<i>Other misc. combustibles</i>	
Domestic	SINGLE(2.5)
Civic Amenity	SINGLE(4.2)
Commercial	SINGLE(5.0)
Industrial	SINGLE(5.0)
User Defined 1	SINGLE(10.0)
Water (%)	SINGLE(20.0)
Cellulose (%)	SINGLE(25.0)
Hemi-Cellulose (%)	SINGLE(25.0)
Decomposition (%)	SINGLE(50.0)
<i>Garden waste</i>	
Domestic	SINGLE(4.4)
Civic Amenity	SINGLE(32.1)
Water (%)	SINGLE(65.0)
Cellulose (%)	SINGLE(25.7)
Hemi-Cellulose (%)	SINGLE(13.0)
Decomposition (%)	SINGLE(62.0)
<i>Other putrescible</i>	
Domestic	SINGLE(6.2)
Civic Amenity	SINGLE(14.8)
Commercial	SINGLE(5.0)
Industrial	SINGLE(5.0)
Water (%)	SINGLE(65.0)
Cellulose (%)	SINGLE(55.4)
Hemi-Cellulose (%)	SINGLE(7.2)
Decomposition (%)	SINGLE(76.0)
<i>10mm fines</i>	
Domestic	SINGLE(1.8)
Civic Amenity	SINGLE(1.2)
Commercial	SINGLE(1.9)
Industrial	SINGLE(0.5)
Water (%)	SINGLE(40.0)
Cellulose (%)	SINGLE(25.0)
Hemi-Cellulose (%)	SINGLE(25.0)
Decomposition (%)	SINGLE(50.0)
<i>Sewage sludge</i>	
Sewage Sludge	SINGLE(100.0)
Water (%)	SINGLE(70.0)
Cellulose (%)	SINGLE(14.0)
Hemi-Cellulose (%)	SINGLE(14.0)
Decomposition (%)	SINGLE(75.0)
<i>Composted organic material</i>	
Composted Organic Material	SINGLE(100.0)
Water (%)	SINGLE(30.0)
Cellulose (%)	UNIFORM(7.47, 9.59)
Hemi-Cellulose (%)	UNIFORM(7.47, 9.59)
Decomposition (%)	SINGLE(57.0)
<i>Incinerator ash</i>	
Commercial	SINGLE(0.2)
Industrial	SINGLE(25.5)
Incinerator Ash	SINGLE(100.0)
Water (%)	SINGLE(30.0)
Cellulose (%)	TRIANGULAR(0.5, 0.7, 1.5)
Hemi-Cellulose (%)	TRIANGULAR(0.5, 0.7, 1.5)
Decomposition (%)	SINGLE(57.0)
<i>Non degradable</i>	
Domestic	SINGLE(75.3)
Civic Amenity	SINGLE(28.0)

Commercial		SINGLE(78.5)
Industrial		SINGLE(53.7)
Inert		SINGLE(100.0)
User Defined 1		SINGLE(90.0)
Water (%)		SINGLE(0.0)
Cellulose (%)		SINGLE(0.0)
Hemi-Cellulose (%)		SINGLE(0.0)
Decomposition (%)		SINGLE(0.0)
Calcium Sulphate (%)		
Iron (%)		
2026		2020+ Low C C&I
2027		2020+ Low C C&I
Justification:	[Changed]	Wales default, with NRW agreed Low C C+I, 10% LoI

Trace Gases

Combustion Products		Molecular Ratio
Sulphur dioxide		2
Justification:	[Default]	Default Value

Cell 1a

Infiltration		SINGLE(900.0)
Justification:	[Changed]	Met Office

Waste Input

Year		AmountDeposited (t)
2020		TRIANGULAR(4.53E+04, 5.03E+04, 5.53E+04)
Justification:	[Changed]	Cell Volume

Waste Breakdown

2020		
Inert		UNIFORM(15.0, 20.0)
User Defined 1		UNIFORM(80.0, 85.0)
Justification:	[Default]	Client data

Trace Gases

Source Gases		Concentration [mg/m3]
1,1,1,2-Tetrafluorochloroethane		LOGTRIANGULAR(0.002, 0.2, 2.0)
1,1,1-Trichlorotrifluoroethane		LOGTRIANGULAR(0.005, 0.4, 8.0)
1,1,2-Trichloroethane		LOGTRIANGULAR(0.004, 1.0, 10.0)
1,1-Dichloroethane		LOGTRIANGULAR(0.02, 0.28, 3.9)
1,1-Dichloroethene		LOGTRIANGULAR(0.03, 2.8, 19.0)
1,1-Dichlorotetrafluoroethane		LOGTRIANGULAR(0.05, 0.25, 6.4)
1,2-Dichloropropane		SINGLE(0.0)
1,2-Dichlorotetrafluoroethane		LOGTRIANGULAR(0.01, 9.8, 300.0)
1-butanethiol		LOGUNIFORM(1.00E-30, 8.00E-02)
1-Chloro-1,1-difluoroethane		LOGTRIANGULAR(0.04, 0.57, 31.0)
2-butoxy ethanol		LOGUNIFORM(1.00E-30, 5.00E-02)
2-Chloro-1,1,1-trifluoroethane		LOGUNIFORM(0.05, 1.5)
2-Propanol		LOGTRIANGULAR(0.005, 2.0, 34.0)
Acetaldehyde (ethanal)		LOGUNIFORM(0.075, 2.546)
Acetone		LOGTRIANGULAR(0.005, 0.1, 50.0)
Acrylonitrile		LOGTRIANGULAR(0.02, 0.4, 38.0)
Benzene		LOGTRIANGULAR(3.1, 15.0, 73.0)
Bromodichloromethane		SINGLE(0.0)
Butadiene (modelled as 1,3-Butadiene)		LOGUNIFORM(1.00E-30, 2.00E-02)
Butane		LOGTRIANGULAR(0.19, 1.0, 709.0)
Butene isomers		LOGTRIANGULAR(1.00E-03, 2.00E-01, 1.80E+00)
Butyric acid		LOGTRIANGULAR(1.00E-30, 1.00E-01, 1.75E+01)
Carbon disulphide		LOGUNIFORM(0.9, 170.0)
Carbon monoxide		LOGTRIANGULAR(0.11, 1.1, 5000.0)
Carbon tetrachloride (tetrachloromethane)		LOGUNIFORM(1.00E-30, 2.00E-02)
Carbonyl sulphide		LOGTRIANGULAR(0.006, 0.2, 4.4)
Chlorobenzene		LOGUNIFORM(0.002, 3000.0)
Chlorodifluoromethane		LOGTRIANGULAR(0.005, 0.1, 9900.0)
Chloroethane		LOGUNIFORM(1.00E-30, 5.30E+00)
Chlorofluorocarbons (CFCs) (Total)		LOGTRIANGULAR(0.06, 102.3, 1230.0)
Chlorofluoromethane		LOGTRIANGULAR(0.008, 0.2, 110.0)
Chloroform (trichloromethane)		LOGTRIANGULAR(1.00E-03, 2.00E-01, 7.00E+01)
Chlorotrifluoromethane		LOGTRIANGULAR(0.1, 0.2, 49.0)
Dichlorodifluoromethane		LOGTRIANGULAR(0.01, 9.0, 790.0)
Dichlorofluoromethane		LOGTRIANGULAR(1.00E-03, 1.00E-02, 6.02E+02)
Dichloromethane (methylene chloride)		LOGTRIANGULAR(1.00E-03, 2.00E-02, 1.52E+03)
Diethyl disulphide		LOGTRIANGULAR(1.00E-03, 2.00E-02, 2.60E+00)
Dimethyl disulphide		LOGTRIANGULAR(0.03, 0.17, 12.0)
Dimethyl sulphide		LOGTRIANGULAR(0.03, 0.73, 24.3)
Ethane		LOGTRIANGULAR(0.005, 6.25, 200.0)
Ethanethiol (ethyl mercaptan)		LOGUNIFORM(1.00E-30, 8.00E-02)
Ethanol		LOGTRIANGULAR(0.005, 0.2, 810.0)
Ethyl butyrate		LOGUNIFORM(0.41, 42.0)
Ethyl toluene (all isomers)		LOGTRIANGULAR(1.00E-03, 1.00E-02, 8.30E+00)
Ethylbenzene		LOGTRIANGULAR(1.00E-03, 1.00E-03, 8.75E+02)
Ethylene		UNIFORM(0.2, 5.8)
Ethylene dibromide		SINGLE(0.0)
Ethylene dichloride		LOGTRIANGULAR(0.006, 0.01, 1820.0)
Fluorotrichloromethane		LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.00E+03)
Formaldehyde (methanal)		LOGTRIANGULAR(0.026, 0.068, 0.188)
Freon 113		LOGTRIANGULAR(0.013, 4.8, 125.0)
Furan		LOGTRIANGULAR(0.02, 0.82, 6.2)
Halons		SINGLE(0.0)

Hexachlorocyclohexane (all isomers)		SINGLE(0.0)
Hexane		LOGTRIANGULAR(1.00E-03, 9.60E+00, 4.40E+01)
Hydrochlorofluorocarbons (HCFCs) (Total)		LOGTRIANGULAR(0.02, 128.8, 916.2)
Hydrofluorocarbons (HFCs) (Total)		SINGLE(0.0)
Hydrogen sulphide		LOGTRIANGULAR(10.0, 200.0, 750.0)
Limonene		LOGTRIANGULAR(1.00E-03, 1.00E-01, 2.40E+02)
Mercury		LOGUNIFORM(1.70E-04, 1.33E-03)
Methanethiol (methyl mercaptan)		LOGUNIFORM(1.00E-30, 3.00E-01)
Methyl chloride (chloromethane)		LOGTRIANGULAR(0.006, 0.2, 10.0)
Methyl chloroform (1,1,1-Trichloroethane)		LOGTRIANGULAR(1.00E-03, 1.80E+02, 1.60E+03)
Methyl ethyl ketone (2-butanone)		LOGTRIANGULAR(0.005, 0.005, 73.0)
Methyl isobutyl ketone		LOGTRIANGULAR(0.005, 0.2, 9.9)
Nitric acid		SINGLE(0.0)
Odour Units (Predicted)		TRIANGULAR(5.00E+04, 1.25E+05, 2.50E+05)
PAH (reported as Naphthalene)		LOGTRIANGULAR(1.00E-03, 2.00E-01, 1.70E+01)
para-Dichlorobenzene (modelled as 1,4-Dichlorobenzene)		LOGTRIANGULAR(0.006, 0.05, 2.7)
Pentane		LOGTRIANGULAR(0.02, 0.3, 105.0)
Pentene (all isomers)		LOGTRIANGULAR(0.24, 3.5, 12.0)
Perfluorocarbons (PFCs) (Total)		SINGLE(0.0)
Phenol		SINGLE(0.0)
PM10s		SINGLE(0.0)
Propane		LOGTRIANGULAR(1.00E-03, 1.90E+00, 1.29E+01)
Propanethiol		LOGUNIFORM(1.00E-30, 9.00E-02)
Sulphide, total simulations with H2S		LOGTRIANGULAR(1.00E-03, 2.40E+00, 5.58E+03)
Sulphide, total simulations without H2S		LOGTRIANGULAR(5.00E-04, 8.00E-03, 3.50E+00)
t-1,2-Dichloroethene		LOGTRIANGULAR(0.02, 0.24, 2.6)
Tetrachloroethane (modelled as 1,1,2,2-Tetrachloroethane)		LOGUNIFORM(1.00E-03, 5.00E+01)
Tetrachloroethylene (Tetrachloroethene)		LOGTRIANGULAR(1.00E-03, 1.00E-02, 7.70E+03)
Toluene		LOGTRIANGULAR(0.01, 0.1, 1250.0)
Trichlorobenzene (all isomers)		LOGTRIANGULAR(0.01, 0.01, 0.13)
Trichloroethylene (trichloroethene)		LOGTRIANGULAR(0.25, 1.65, 88.0)
Trichlorofluoromethane		LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.00E+03)
Trichlorotrifluoroethane		LOGTRIANGULAR(1.00E-03, 4.80E+00, 2.40E+01)
Trimethylbenzene (all isomers)		LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.87E+02)
Vinyl chloride (chloroethene, chloroethyle)		LOGTRIANGULAR(1.1, 31.0, 730.0)
Xylene (all isomers)		LOGTRIANGULAR(1.00E-03, 1.00E-03, 6.18E+04)
Justification:	[Default]	Default Value
VOC Half-life		NORMAL(4.11, 1.56)
Justification:	[Default]	Default Value

Waste Moisture Content

Degradation rate - Filling Phase		Wet
Justification:	[Changed]	NRW Decision doc
Degradation rate - after change		Average
Justification:	[Default]	Default Value
Waste Density		UNIFORM(0.8, 1.2)
Justification:	[Default]	Default Value
Leachate Head		SINGLE(1.0)
Justification:	[Default]	Default Value
Hydraulic Conductivity		LOGUNIFORM(1.00E-09, 1.00E-05)
Justification:	[Default]	Default Value

Engineered Controls

Cap		Single Liner
Cap Thickness		SINGLE(1.00E-03)
Cap Hydraulic Conductivity		SINGLE(1.00E-11)
Justifications		
Cap	[Changed]	Site design
Cap Thickness	[Changed]	Site design
Cap Hydraulic Conductivity	[Changed]	Site design
liner		Composite
First Layer:		
Liner Thickness		UNIFORM(0.45, 0.55)
Liner Hydraulic Conductivity		SINGLE(5.00E-10)
Second Layer:		
Liner 2 Thickness		SINGLE(0.002)
Liner 2 Hydraulic Conductivity		SINGLE(1.00E-12)
Justifications		
Liner	[Changed]	Site design
Liner Thickness	[Changed]	Site design
Liner Hydraulic Conductivity	[Changed]	Site design
Justification:	[Changed]	Default
Methane Oxidation %		SINGLE(10.0)
Justification:	[Default]	Default Value
Land Raise Depth		SINGLE(16.0)

Geosphere

Ground Surface (mAOD)		106
Water Table (mAOD)		88
Geosphere Moisture Content		UNIFORM(5.0, 20.0)
Geosphere Porosity		UNIFORM(24.0, 53.0)

Cell 1b

Infiltration		SINGLE(900.0)
Justification:	[Changed]	Met Office

Waste Input

Year		AmountDeposited (t)
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2020	TRIANGULAR(5.28E+04, 5.87E+04, 6.46E+04)
2021	SINGLE(0.0)
2022	SINGLE(0.0)
2023	SINGLE(0.0)
2024	SINGLE(0.0)
2025	SINGLE(0.0)
2026	TRIANGULAR(5.28E+04, 5.87E+04, 6.46E+04)
Justification:	[Changed] Cell Volume

Waste Breakdown

2020	
Inert	UNIFORM(15.0, 20.0)
User Defined 1	UNIFORM(80.0, 85.0)
2021	
Inert	UNIFORM(15.0, 20.0)
User Defined 1	UNIFORM(80.0, 85.0)
2022	
Inert	UNIFORM(15.0, 20.0)
User Defined 1	UNIFORM(80.0, 85.0)
2023	
Inert	UNIFORM(15.0, 20.0)
User Defined 1	UNIFORM(80.0, 85.0)
2024	
Inert	UNIFORM(15.0, 20.0)
User Defined 1	UNIFORM(80.0, 85.0)
2025	
Inert	UNIFORM(15.0, 20.0)
User Defined 1	UNIFORM(80.0, 85.0)
2026	
Inert	UNIFORM(15.0, 20.0)
User Defined 1	UNIFORM(80.0, 85.0)
Justification:	[Default] Client data

Trace Gases

<i>Source Gases</i>	Concentration [mg/m3]
1,1,1,2-Tetrafluorochloroethane	LOGTRIANGULAR(0.002, 0.2, 2.0)
1,1,1-Trichlorotrifluoroethane	LOGTRIANGULAR(0.005, 0.4, 8.0)
1,1,2-Trichloroethane	LOGTRIANGULAR(0.004, 1.0, 10.0)
1,1-Dichloroethane	LOGTRIANGULAR(0.02, 0.28, 3.9)
1,1-Dichloroethene	LOGTRIANGULAR(0.03, 2.8, 19.0)
1,1-Dichlorotetrafluoroethane	LOGTRIANGULAR(0.05, 0.25, 6.4)
1,2-Dichloropropane	SINGLE(0.0)
1,2-Dichlorotetrafluoroethane	LOGTRIANGULAR(0.01, 9.8, 300.0)
1-butanethiol	LOGUNIFORM(1.00E-30, 8.00E-02)
1-Chloro-1,1-difluoroethane	LOGTRIANGULAR(0.04, 0.57, 31.0)
2-butoxy ethanol	LOGUNIFORM(1.00E-30, 5.00E-02)
2-Chloro-1,1,1-trifluoroethane	LOGUNIFORM(0.05, 1.5)
2-Propanol	LOGTRIANGULAR(0.005, 2.0, 34.0)
Acetaldehyde (ethanal)	LOGUNIFORM(0.075, 2.546)
Acetone	LOGTRIANGULAR(0.005, 0.1, 50.0)
Acrylonitrile	LOGTRIANGULAR(0.02, 0.4, 38.0)
Benzene	LOGTRIANGULAR(3.1, 15.0, 73.0)
Bromodichloromethane	SINGLE(0.0)
Butadiene (modelled as 1,3-Butadiene)	LOGUNIFORM(1.00E-30, 2.00E-02)
Butane	LOGTRIANGULAR(0.19, 1.0, 709.0)
Butene isomers	LOGTRIANGULAR(1.00E-03, 2.00E-01, 1.80E+00)
Butyric acid	LOGTRIANGULAR(1.00E-30, 1.00E-01, 1.75E+01)
Carbon disulphide	LOGUNIFORM(0.9, 170.0)
Carbon monoxide	LOGTRIANGULAR(0.11, 1.1, 5000.0)
Carbon tetrachloride (tetrachloromethane)	LOGUNIFORM(1.00E-30, 2.00E-02)
Carbonyl sulphide	LOGTRIANGULAR(0.006, 0.2, 4.4)
Chlorobenzene	LOGUNIFORM(0.002, 3000.0)
Chlorodifluoromethane	LOGTRIANGULAR(0.005, 0.1, 9900.0)
Chloroethane	LOGUNIFORM(1.00E-30, 5.30E+00)
Chlorofluorocarbons (CFCs) (Total)	LOGTRIANGULAR(0.06, 102.3, 1230.0)
Chlorofluoromethane	LOGTRIANGULAR(0.008, 0.2, 110.0)
Chloroform (trichloromethane)	LOGTRIANGULAR(1.00E-03, 2.00E-01, 7.00E+01)
Chlorotrifluoromethane	LOGTRIANGULAR(0.1, 0.2, 49.0)
Dichlorodifluoromethane	LOGTRIANGULAR(0.01, 9.0, 790.0)
Dichlorofluoromethane	LOGTRIANGULAR(1.00E-03, 1.00E-02, 6.02E+02)
Dichloromethane (methylene chloride)	LOGTRIANGULAR(1.00E-03, 2.00E-02, 1.52E+03)
Diethyl disulphide	LOGTRIANGULAR(1.00E-03, 2.00E-02, 2.60E+00)
Dimethyl disulphide	LOGTRIANGULAR(0.03, 0.17, 12.0)
Dimethyl sulphide	LOGTRIANGULAR(0.03, 0.73, 24.3)
Ethane	LOGTRIANGULAR(0.005, 6.25, 200.0)
Ethanethiol (ethyl mercaptan)	LOGUNIFORM(1.00E-30, 8.00E-02)
Ethanol	LOGTRIANGULAR(0.005, 0.2, 810.0)
Ethyl butyrate	LOGUNIFORM(0.41, 42.0)
Ethyl toluene (all isomers)	LOGTRIANGULAR(1.00E-03, 1.00E-02, 8.30E+00)
Ethylbenzene	LOGTRIANGULAR(1.00E-03, 1.00E-03, 8.75E+02)
Ethylene	UNIFORM(0.2, 5.8)
Ethylene dibromide	SINGLE(0.0)
Ethylene dichloride	LOGTRIANGULAR(0.006, 0.01, 1820.0)
Fluorotrichloromethane	LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.00E+03)
Formaldehyde (methanal)	LOGTRIANGULAR(0.026, 0.068, 0.188)
Freon 113	LOGTRIANGULAR(0.013, 4.8, 125.0)
Furan	LOGTRIANGULAR(0.02, 0.82, 6.2)
Halons	SINGLE(0.0)
Hexachlorocyclohexane (all isomers)	SINGLE(0.0)

Hexane		LOGTRIANGULAR(1.00E-03, 9.60E+00, 4.40E+01)
Hydrochlorofluorocarbons (HCFCs) (Total)		LOGTRIANGULAR(0.02, 128.8, 916.2)
Hydrofluorocarbons (HFCs) (Total)		SINGLE(0.0)
Hydrogen sulphide		LOGTRIANGULAR(10.0, 200.0, 750.0)
Limonene		LOGTRIANGULAR(1.00E-03, 1.00E-01, 2.40E+02)
Mercury		LOGUNIFORM(1.70E-04, 1.33E-03)
Methanethiol (methyl mercaptan)		LOGUNIFORM(1.00E-30, 3.00E-01)
Methyl chloride (chloromethane)		LOGTRIANGULAR(0.006, 0.2, 10.0)
Methyl chloroform (1,1,1-Trichloroethane)		LOGTRIANGULAR(1.00E-03, 1.80E+02, 1.60E+03)
Methyl ethyl ketone (2-butanone)		LOGTRIANGULAR(0.005, 0.005, 73.0)
Methyl isobutyl ketone		LOGTRIANGULAR(0.005, 0.2, 9.9)
Nitric acid		SINGLE(0.0)
Odour Units (Predicted)		TRIANGULAR(5.00E+04, 1.25E+05, 2.50E+05)
PAH (reported as Naphthalene)		LOGTRIANGULAR(1.00E-03, 2.00E-01, 1.70E+01)
para-Dichlorobenzene (modelled as 1,4-Dichlorobenzene)		LOGTRIANGULAR(0.006, 0.05, 2.7)
Pentane		LOGTRIANGULAR(0.02, 0.3, 105.0)
Pentene (all isomers)		LOGTRIANGULAR(0.24, 3.5, 12.0)
Perfluorocarbons (PFCs) (Total)		SINGLE(0.0)
Phenol		SINGLE(0.0)
PM10s		SINGLE(0.0)
Propane		LOGTRIANGULAR(1.00E-03, 1.90E+00, 1.29E+01)
Propanethiol		LOGUNIFORM(1.00E-30, 9.00E-02)
Sulphide, total simulations with H2S		LOGTRIANGULAR(1.00E-03, 2.40E+00, 5.58E+03)
Sulphide, total simulations without H2S		LOGTRIANGULAR(5.00E-04, 8.00E-03, 3.50E+00)
t-1,2-Dichloroethene		LOGTRIANGULAR(0.02, 0.24, 2.6)
Tetrachloroethane (modelled as 1,1,2,2-Tetrachloroethane)		LOGUNIFORM(1.00E-03, 5.00E+01)
Tetrachloroethylene (Tetrachloroethene)		LOGTRIANGULAR(1.00E-03, 1.00E-02, 7.70E+03)
Toluene		LOGTRIANGULAR(0.01, 0.1, 1250.0)
Trichlorobenzene (all isomers)		LOGTRIANGULAR(0.01, 0.01, 0.13)
Trichloroethylene (trichloroethene)		LOGTRIANGULAR(0.25, 1.65, 88.0)
Trichlorofluoromethane		LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.00E+03)
Trichlorotrifluoroethane		LOGTRIANGULAR(1.00E-03, 4.80E+00, 2.40E+01)
Trimethylbenzene (all isomers)		LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.87E+02)
Vinyl chloride (chloroethene, chloroethylene)		LOGTRIANGULAR(1.1, 31.0, 730.0)
Xylene (all isomers)		LOGTRIANGULAR(1.00E-03, 1.00E-03, 6.18E+04)
Justification:	[Default]	Default Value
VOC Halflife		NORMAL(4.11, 1.56)
Justification:	[Default]	Default Value

Waste Moisture Content

Degradation rate - Filling Phase		Wet
Justification:	[Changed]	NRW Decision doc
Degradation rate - after change		Average
Justification:	[Default]	Default Value
Waste Density		UNIFORM(0.8, 1.2)
Justification:	[Default]	Default Value
Leachate Head		SINGLE(1.0)
Justification:	[Default]	Default Value
Hydraulic Conductivity		LOGUNIFORM(1.00E-09, 1.00E-05)
Justification:	[Default]	Default Value

Engineered Controls

Cap		Single Liner
Cap Thickness		SINGLE(1.00E-03)
Cap Hydraulic Conductivity		SINGLE(1.00E-11)
Justifications		
Cap	[Changed]	Site design
Cap Thickness	[Changed]	Site design
Cap Hydraulic Conductivity	[Changed]	Site design
liner		Composite
First Layer:		
Liner Thickness		UNIFORM(0.45, 0.55)
Liner Hydraulic Conductivity		SINGLE(5.00E-10)
Second Layer:		
Liner 2 Thickness		SINGLE(0.002)
Liner 2 Hydraulic Conductivity		SINGLE(1.00E-12)
Justifications		
Liner	[Changed]	Site design
Liner Thickness	[Changed]	Site design
Liner Hydraulic Conductivity	[Changed]	Site design
Justification:	[Changed]	Default
Methane Oxidation %		SINGLE(10.0)
Justification:	[Default]	Default Value
Land Raise Depth		SINGLE(16.0)

Geosphere

Ground Surface (mAOD)		106
Water Table (mAOD)		88
Geosphere Moisture Content		UNIFORM(5.0, 20.0)
Geosphere Porosity		UNIFORM(24.0, 53.0)

Cell 2a

Infiltration		SINGLE(900.0)
Justification:	[Changed]	Met Office

Waste Input

Year		AmountDeposited (t)
2020		TRIANGULAR(5.40E+04, 5.99E+04, 6.59E+04)

Justification:	[Changed]	Cell Volume
Waste Breakdown		
2020		
Inert		UNIFORM(15.0, 20.0)
User Defined 1		UNIFORM(80.0, 85.0)
Justification:	[Default]	Client data
Trace Gases		
<i>Source Gases</i>		Concentration [mg/m3]
1,1,1,2-Tetrafluorochloroethane		LOGTRIANGULAR(0.002, 0.2, 2.0)
1,1,1-Trichlorotrifluoroethane		LOGTRIANGULAR(0.005, 0.4, 8.0)
1,1,2-Trichloroethane		LOGTRIANGULAR(0.004, 1.0, 10.0)
1,1-Dichloroethane		LOGTRIANGULAR(0.02, 0.28, 3.9)
1,1-Dichloroethene		LOGTRIANGULAR(0.03, 2.8, 19.0)
1,1-Dichlorotetrafluoroethane		LOGTRIANGULAR(0.05, 0.25, 6.4)
1,2-Dichloropropane		SINGLE(0.0)
1,2-Dichlorotetrafluoroethane		LOGTRIANGULAR(0.01, 9.8, 300.0)
1-butanethiol		LOGUNIFORM(1.00E-30, 8.00E-02)
1-Chloro-1,1-difluoroethane		LOGTRIANGULAR(0.04, 0.57, 31.0)
2-butoxy ethanol		LOGUNIFORM(1.00E-30, 5.00E-02)
2-Chloro-1,1,1-trifluoroethane		LOGUNIFORM(0.05, 1.5)
2-Propanol		LOGTRIANGULAR(0.005, 2.0, 34.0)
Acetaldehyde (ethanal)		LOGUNIFORM(0.075, 2.546)
Acetone		LOGTRIANGULAR(0.005, 0.1, 50.0)
Acrylonitrile		LOGTRIANGULAR(0.02, 0.4, 38.0)
Benzene		LOGTRIANGULAR(3.1, 15.0, 73.0)
Bromodichloromethane		SINGLE(0.0)
Butadiene (modelled as 1,3-Butadiene)		LOGUNIFORM(1.00E-30, 2.00E-02)
Butane		LOGTRIANGULAR(0.19, 1.0, 709.0)
Butene isomers		LOGTRIANGULAR(1.00E-03, 2.00E-01, 1.80E+00)
Butyric acid		LOGTRIANGULAR(1.00E-30, 1.00E-01, 1.75E+01)
Carbon disulphide		LOGUNIFORM(0.9, 170.0)
Carbon monoxide		LOGTRIANGULAR(0.11, 1.1, 5000.0)
Carbon tetrachloride (tetrachloromethane)		LOGUNIFORM(1.00E-30, 2.00E-02)
Carbonyl sulphide		LOGTRIANGULAR(0.006, 0.2, 4.4)
Chlorobenzene		LOGUNIFORM(0.002, 3000.0)
Chlorodifluoromethane		LOGTRIANGULAR(0.005, 0.1, 9900.0)
Chloroethane		LOGUNIFORM(1.00E-30, 5.30E+00)
Chlorofluorocarbons (CFCs) (Total)		LOGTRIANGULAR(0.06, 102.3, 1230.0)
Chlorofluoromethane		LOGTRIANGULAR(0.008, 0.2, 110.0)
Chloroform (trichloromethane)		LOGTRIANGULAR(1.00E-03, 2.00E-01, 7.00E+01)
Chlorotrifluoromethane		LOGTRIANGULAR(0.1, 0.2, 49.0)
Dichlorodifluoromethane		LOGTRIANGULAR(0.01, 9.0, 790.0)
Dichlorofluoromethane		LOGTRIANGULAR(1.00E-03, 1.00E-02, 6.02E+02)
Dichloromethane (methylene chloride)		LOGTRIANGULAR(1.00E-03, 2.00E-02, 1.52E+03)
Diethyl disulphide		LOGTRIANGULAR(1.00E-03, 2.00E-02, 2.60E+00)
Dimethyl disulphide		LOGTRIANGULAR(0.03, 0.17, 12.0)
Dimethyl sulphide		LOGTRIANGULAR(0.03, 0.73, 24.3)
Ethane		LOGTRIANGULAR(0.005, 6.25, 200.0)
Ethanethiol (ethyl mercaptan)		LOGUNIFORM(1.00E-30, 8.00E-02)
Ethanol		LOGTRIANGULAR(0.005, 0.2, 810.0)
Ethyl butyrate		LOGUNIFORM(0.41, 42.0)
Ethyl toluene (all isomers)		LOGTRIANGULAR(1.00E-03, 1.00E-02, 8.30E+00)
Ethylbenzene		LOGTRIANGULAR(1.00E-03, 1.00E-03, 8.75E+02)
Ethylene		UNIFORM(0.2, 5.8)
Ethylene dibromide		SINGLE(0.0)
Ethylene dichloride		LOGTRIANGULAR(0.006, 0.01, 1820.0)
Fluorotrichloromethane		LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.00E+03)
Formaldehyde (methanal)		LOGTRIANGULAR(0.026, 0.068, 0.188)
Freon 113		LOGTRIANGULAR(0.013, 4.8, 125.0)
Furan		LOGTRIANGULAR(0.02, 0.82, 6.2)
Halons		SINGLE(0.0)
Hexachlorocyclohexane (all isomers)		SINGLE(0.0)
Hexane		LOGTRIANGULAR(1.00E-03, 9.60E+00, 4.40E+01)
Hydrochlorofluorocarbons (HCFCs) (Total)		LOGTRIANGULAR(0.02, 128.8, 916.2)
Hydrofluorocarbons (HFCs) (Total)		SINGLE(0.0)
Hydrogen sulphide		LOGTRIANGULAR(10.0, 200.0, 750.0)
Limonene		LOGTRIANGULAR(1.00E-03, 1.00E-01, 2.40E+02)
Mercury		LOGUNIFORM(1.70E-04, 1.33E-03)
Methanethiol (methyl mercaptan)		LOGUNIFORM(1.00E-30, 3.00E-01)
Methyl chloride (chloromethane)		LOGTRIANGULAR(0.006, 0.2, 10.0)
Methyl chloroform (1,1,1-Trichloroethane)		LOGTRIANGULAR(1.00E-03, 1.80E+02, 1.60E+03)
Methyl ethyl ketone (2-butanone)		LOGTRIANGULAR(0.005, 0.005, 73.0)
Methyl isobutyl ketone		LOGTRIANGULAR(0.005, 0.2, 9.9)
Nitric acid		SINGLE(0.0)
Odour Units (Predicted)		TRIANGULAR(5.00E+04, 1.25E+05, 2.50E+05)
PAH (reported as Naphthalene)		LOGTRIANGULAR(1.00E-03, 2.00E-01, 1.70E+01)
para-Dichlorobenzene (modelled as 1,4-Dichlorobenzene)		LOGTRIANGULAR(0.006, 0.05, 2.7)
Pentane		LOGTRIANGULAR(0.02, 0.3, 105.0)
Pentene (all isomers)		LOGTRIANGULAR(0.24, 3.5, 12.0)
Perfluorocarbons (PFCs) (Total)		SINGLE(0.0)
Phenol		SINGLE(0.0)
PM10s		SINGLE(0.0)
Propane		LOGTRIANGULAR(1.00E-03, 1.90E+00, 1.29E+01)
Propanethiol		LOGUNIFORM(1.00E-30, 9.00E-02)
Sulphide, total simulations with H2S		LOGTRIANGULAR(1.00E-03, 2.40E+00, 5.58E+03)
Sulphide, total simulations without H2S		LOGTRIANGULAR(5.00E-04, 8.00E-03, 3.50E+00)

t-1,2-Dichloroethene		LOGTRIANGULAR(0.02, 0.24, 2.6)
Tetrachloroethane (modelled as 1,1,2,2-Tetrachloroethane)		LOGUNIFORM(1.00E-03, 5.00E+01)
Tetrachloroethylene (Tetrachloroethene)		LOGTRIANGULAR(1.00E-03, 1.00E-02, 7.70E+03)
Toluene		LOGTRIANGULAR(0.01, 0.1, 1250.0)
Trichlorobenzene (all isomers)		LOGTRIANGULAR(0.01, 0.01, 0.13)
Trichloroethylene (trichloroethene)		LOGTRIANGULAR(0.25, 1.65, 88.0)
Trichlorofluoromethane		LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.00E+03)
Trichlorotrifluoroethane		LOGTRIANGULAR(1.00E-03, 4.80E+00, 2.40E+01)
Trimethylbenzene (all isomers)		LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.87E+02)
Vinyl chloride (chloroethene, chloroethylene)		LOGTRIANGULAR(1.1, 31.0, 730.0)
Xylene (all isomers)		LOGTRIANGULAR(1.00E-03, 1.00E-03, 6.18E+04)
Justification:	[Default]	Default Value
VOC Half-life		NORMAL(4.11, 1.56)
Justification:	[Default]	Default Value

Waste Moisture Content

Degradation rate - Filling Phase		Wet
Justification:	[Changed]	NRW Decision doc
Degradation rate - after change		Average
Justification:	[Default]	Default Value
Waste Density		UNIFORM(0.8, 1.2)
Justification:	[Default]	Default Value
Leachate Head		SINGLE(1.0)
Justification:	[Default]	Default Value
Hydraulic Conductivity		LOGUNIFORM(1.00E-09, 1.00E-05)
Justification:	[Default]	Default Value

Engineered Controls

Cap		Single Liner
Cap Thickness		SINGLE(1.00E-03)
Cap Hydraulic Conductivity		SINGLE(1.00E-11)
Justifications		
Cap	[Changed]	Site design
Cap Thickness	[Changed]	Site design
Cap Hydraulic Conductivity	[Changed]	Site design
liner		Composite
First Layer:		
Liner Thickness		UNIFORM(0.45, 0.55)
Liner Hydraulic Conductivity		SINGLE(5.00E-10)
Second Layer:		
Liner 2 Thickness		SINGLE(0.002)
Liner 2 Hydraulic Conductivity		SINGLE(1.00E-12)
Justifications		
Liner	[Changed]	Site design
Liner Thickness	[Changed]	Site design
Liner Hydraulic Conductivity	[Changed]	Site design
Justification:	[Changed]	Default
Methane Oxidation %		SINGLE(10.0)
Justification:	[Default]	Default Value
Land Raise Depth		SINGLE(16.0)

Geosphere

Ground Surface (mAOD)		106
Water Table (mAOD)		88
Geosphere Moisture Content		UNIFORM(5.0, 20.0)
Geosphere Porosity		UNIFORM(24.0, 53.0)

Cell 2b

Infiltration		SINGLE(900.0)
Justification:	[Changed]	Met Office

Waste Input

Year		Amount Deposited (t)
2020		TRIANGULAR(6.29E+04, 6.99E+04, 7.70E+04)
2021		SINGLE(0.0)
2022		SINGLE(0.0)
2023		TRIANGULAR(6.29E+04, 6.99E+04, 7.70E+04)
Justification:	[Changed]	Cell Volume

Waste Breakdown

2020		
Inert		UNIFORM(15.0, 20.0)
User Defined 1		UNIFORM(80.0, 85.0)
2021		
Inert		UNIFORM(15.0, 20.0)
User Defined 1		UNIFORM(80.0, 85.0)
2022		
Inert		UNIFORM(15.0, 20.0)
User Defined 1		UNIFORM(80.0, 85.0)
2023		
Inert		UNIFORM(15.0, 20.0)
User Defined 1		UNIFORM(80.0, 85.0)
Justification:	[Default]	Client data

Trace Gases

Source Gases		Concentration [mg/m3]
1,1,1,2-Tetrafluorochloroethane		LOGTRIANGULAR(0.002, 0.2, 2.0)
1,1,1-Trichlorotrifluoroethane		LOGTRIANGULAR(0.005, 0.4, 8.0)
1,1,2-Trichloroethane		LOGTRIANGULAR(0.004, 1.0, 10.0)
1,1-Dichloroethane		LOGTRIANGULAR(0.02, 0.28, 3.9)
1,1-Dichloroethene		LOGTRIANGULAR(0.03, 2.8, 19.0)

1,1-Dichlorotetrafluoroethane	LOGTRIANGULAR(0.05, 0.25, 6.4)
1,2-Dichloropropane	SINGLE(0.0)
1,2-Dichlorotetrafluoroethane	LOGTRIANGULAR(0.01, 9.8, 300.0)
1-butanethiol	LOGUNIFORM(1.00E-30, 8.00E-02)
1-Chloro-1,1-difluoroethane	LOGTRIANGULAR(0.04, 0.57, 31.0)
2-butoxy ethanol	LOGUNIFORM(1.00E-30, 5.00E-02)
2-Chloro-1,1,1-trifluoroethane	LOGUNIFORM(0.05, 1.5)
2-Propanol	LOGTRIANGULAR(0.005, 2.0, 34.0)
Acetaldehyde (ethanal)	LOGUNIFORM(0.075, 2.546)
Acetone	LOGTRIANGULAR(0.005, 0.1, 50.0)
Acrylonitrile	LOGTRIANGULAR(0.02, 0.4, 38.0)
Benzene	LOGTRIANGULAR(3.1, 15.0, 73.0)
Bromodichloromethane	SINGLE(0.0)
Butadiene (modelled as 1,3-Butadiene)	LOGUNIFORM(1.00E-30, 2.00E-02)
Butane	LOGTRIANGULAR(0.19, 1.0, 709.0)
Butene isomers	LOGTRIANGULAR(1.00E-03, 2.00E-01, 1.80E+00)
Butyric acid	LOGTRIANGULAR(1.00E-30, 1.00E-01, 1.75E+01)
Carbon disulphide	LOGUNIFORM(0.9, 170.0)
Carbon monoxide	LOGTRIANGULAR(0.11, 1.1, 5000.0)
Carbon tetrachloride (tetrachloromethane)	LOGUNIFORM(1.00E-30, 2.00E-02)
Carbonyl sulphide	LOGTRIANGULAR(0.006, 0.2, 4.4)
Chlorobenzene	LOGUNIFORM(0.002, 3000.0)
Chlorodifluoromethane	LOGTRIANGULAR(0.005, 0.1, 9900.0)
Chloroethane	LOGUNIFORM(1.00E-30, 5.30E+00)
Chlorofluorocarbons (CFCs) (Total)	LOGTRIANGULAR(0.06, 102.3, 1230.0)
Chlorofluoromethane	LOGTRIANGULAR(0.008, 0.2, 110.0)
Chloroform (trichloromethane)	LOGTRIANGULAR(1.00E-03, 2.00E-01, 7.00E+01)
Chlorotrifluoromethane	LOGTRIANGULAR(0.1, 0.2, 49.0)
Dichlorodifluoromethane	LOGTRIANGULAR(0.01, 9.0, 790.0)
Dichlorofluoromethane	LOGTRIANGULAR(1.00E-03, 1.00E-02, 6.02E+02)
Dichloromethane (methylene chloride)	LOGTRIANGULAR(1.00E-03, 2.00E-02, 1.52E+03)
Diethyl disulphide	LOGTRIANGULAR(1.00E-03, 2.00E-02, 2.60E+00)
Dimethyl disulphide	LOGTRIANGULAR(0.03, 0.17, 12.0)
Dimethyl sulphide	LOGTRIANGULAR(0.03, 0.73, 24.3)
Ethane	LOGTRIANGULAR(0.005, 6.25, 200.0)
Ethanethiol (ethyl mercaptan)	LOGUNIFORM(1.00E-30, 8.00E-02)
Ethanol	LOGTRIANGULAR(0.005, 0.2, 810.0)
Ethyl butyrate	LOGUNIFORM(0.41, 42.0)
Ethyl toluene (all isomers)	LOGTRIANGULAR(1.00E-03, 1.00E-02, 8.30E+00)
Ethylbenzene	LOGTRIANGULAR(1.00E-03, 1.00E-03, 8.75E+02)
Ethylene	UNIFORM(0.2, 5.8)
Ethylene dibromide	SINGLE(0.0)
Ethylene dichloride	LOGTRIANGULAR(0.006, 0.01, 1820.0)
Fluorotrichloromethane	LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.00E+03)
Formaldehyde (methanal)	LOGTRIANGULAR(0.026, 0.068, 0.188)
Freon 113	LOGTRIANGULAR(0.013, 4.8, 125.0)
Furan	LOGTRIANGULAR(0.02, 0.82, 6.2)
Halons	SINGLE(0.0)
Hexachlorocyclohexane (all isomers)	SINGLE(0.0)
Hexane	LOGTRIANGULAR(1.00E-03, 9.60E+00, 4.40E+01)
Hydrochlorofluorocarbons (HCFCs) (Total)	LOGTRIANGULAR(0.02, 128.8, 916.2)
Hydrofluorocarbons (HFCs) (Total)	SINGLE(0.0)
Hydrogen sulphide	LOGTRIANGULAR(10.0, 200.0, 750.0)
Limonene	LOGTRIANGULAR(1.00E-03, 1.00E-01, 2.40E+02)
Mercury	LOGUNIFORM(1.70E-04, 1.33E-03)
Methanethiol (methyl mercaptan)	LOGUNIFORM(1.00E-30, 3.00E-01)
Methyl chloride (chloromethane)	LOGTRIANGULAR(0.006, 0.2, 10.0)
Methyl chloroform (1,1,1-Trichloroethane)	LOGTRIANGULAR(1.00E-03, 1.80E+02, 1.60E+03)
Methyl ethyl ketone (2-butanone)	LOGTRIANGULAR(0.005, 0.005, 73.0)
Methyl isobutyl ketone	LOGTRIANGULAR(0.005, 0.2, 9.9)
Nitric acid	SINGLE(0.0)
Odour Units (Predicted)	TRIANGULAR(5.00E+04, 1.25E+05, 2.50E+05)
PAH (reported as Naphthalene)	LOGTRIANGULAR(1.00E-03, 2.00E-01, 1.70E+01)
para-Dichlorobenzene (modelled as 1,4-Dichlorobenzene)	LOGTRIANGULAR(0.006, 0.05, 2.7)
Pentane	LOGTRIANGULAR(0.02, 0.3, 105.0)
Pentene (all isomers)	LOGTRIANGULAR(0.24, 3.5, 12.0)
Perfluorocarbons (PFCs) (Total)	SINGLE(0.0)
Phenol	SINGLE(0.0)
PM10s	SINGLE(0.0)
Propane	LOGTRIANGULAR(1.00E-03, 1.90E+00, 1.29E+01)
Propanethiol	LOGUNIFORM(1.00E-30, 9.00E-02)
Sulphide, total simulations with H2S	LOGTRIANGULAR(1.00E-03, 2.40E+00, 5.58E+03)
Sulphide, total simulations without H2S	LOGTRIANGULAR(5.00E-04, 8.00E-03, 3.50E+00)
t-1,2-Dichloroethene	LOGTRIANGULAR(0.02, 0.24, 2.6)
Tetrachloroethane (modelled as 1,1,2,2-Tetrachloroethane)	LOGUNIFORM(1.00E-03, 5.00E+01)
Tetrachloroethylene (Tetrachloroethene)	LOGTRIANGULAR(1.00E-03, 1.00E-02, 7.70E+03)
Toluene	LOGTRIANGULAR(0.01, 0.1, 1250.0)
Trichlorobenzene (all isomers)	LOGTRIANGULAR(0.01, 0.01, 0.13)
Trichloroethylene (trichloroethene)	LOGTRIANGULAR(0.25, 1.65, 88.0)
Trichlorofluoromethane	LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.00E+03)
Trichlorotrifluoroethane	LOGTRIANGULAR(1.00E-03, 4.80E+00, 2.40E+01)
Trimethylbenzene (all isomers)	LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.87E+02)
Vinyl chloride (chloroethene, chloroethyle)	LOGTRIANGULAR(1.1, 31.0, 730.0)
Xylene (all isomers)	LOGTRIANGULAR(1.00E-03, 1.00E-03, 6.18E+04)
Justification:	[Default] Default Value
VOC Half-life	NORMAL(4.11, 1.56)

Justification:	[Default]	Default Value
Waste Moisture Content		
Degradation rate - Filling Phase		Wet
Justification:	[Changed]	NRW Decision doc
Degradation rate - after change		Average
Justification:	[Default]	Default Value
Waste Density		UNIFORM(0.8, 1.2)
Justification:	[Default]	Default Value
Leachate Head		SINGLE(1.0)
Justification:	[Default]	Default Value
Hydraulic Conductivity		LOGUNIFORM(1.00E-09, 1.00E-05)
Justification:	[Default]	Default Value
Engineered Controls		
Cap		Single Liner
Cap Thickness		SINGLE(1.00E-03)
Cap Hydraulic Conductivity		SINGLE(1.00E-11)
Justifications		
Cap	[Changed]	Site design
Cap Thickness	[Changed]	Site design
Cap Hydraulic Conductivity	[Changed]	Site design
liner		Composite
First Layer:		
Liner Thickness		UNIFORM(0.45, 0.55)
Liner Hydraulic Conductivity		SINGLE(5.00E-10)
Second Layer:		
Liner 2 Thickness		SINGLE(0.002)
Liner 2 Hydraulic Conductivity		SINGLE(1.00E-12)
Justifications		
Liner	[Changed]	Site design
Liner Thickness	[Changed]	Site design
Liner Hydraulic Conductivity	[Changed]	Site design
Justification:	[Changed]	Default
Methane Oxidation %		SINGLE(10.0)
Justification:	[Default]	Default Value
Land Raise Depth		SINGLE(16.0)
Geosphere		
Ground Surface (mAOD)		106
Water Table (mAOD)		88
Geosphere Moisture Content		UNIFORM(5.0, 20.0)
Geosphere Porosity		UNIFORM(24.0, 53.0)
Cell 3a		
Infiltration		SINGLE(900.0)
Justification:	[Changed]	Met Office
Waste Input		
Year		AmountDeposited (t)
2020		TRIANGULAR(5.81E+04, 6.46E+04, 7.10E+04)
Justification:	[Changed]	Cell Volume
Waste Breakdown		
2020		
Inert		UNIFORM(15.0, 20.0)
User Defined 1		UNIFORM(80.0, 85.0)
Justification:	[Default]	Client data
Trace Gases		
Source Gases		Concentration [mg/m3]
1,1,1,2-Tetrafluorochloroethane		LOGTRIANGULAR(0.002, 0.2, 2.0)
1,1,1-Trichlorotrifluoroethane		LOGTRIANGULAR(0.005, 0.4, 8.0)
1,1,2-Trichloroethane		LOGTRIANGULAR(0.004, 1.0, 10.0)
1,1-Dichloroethane		LOGTRIANGULAR(0.02, 0.28, 3.9)
1,1-Dichloroethene		LOGTRIANGULAR(0.03, 2.8, 19.0)
1,1-Dichlorotetrafluoroethane		LOGTRIANGULAR(0.05, 0.25, 6.4)
1,2-Dichloropropane		SINGLE(0.0)
1,2-Dichlorotetrafluoroethane		LOGTRIANGULAR(0.01, 9.8, 300.0)
1-butanethiol		LOGUNIFORM(1.00E-30, 8.00E-02)
1-Chloro-1,1-difluoroethane		LOGTRIANGULAR(0.04, 0.57, 31.0)
2-butoxy ethanol		LOGUNIFORM(1.00E-30, 5.00E-02)
2-Chloro-1,1,1-trifluoroethane		LOGUNIFORM(0.05, 1.5)
2-Propanol		LOGTRIANGULAR(0.005, 2.0, 34.0)
Acetaldehyde (ethanal)		LOGUNIFORM(0.075, 2.546)
Acetone		LOGTRIANGULAR(0.005, 0.1, 50.0)
Acrylonitrile		LOGTRIANGULAR(0.02, 0.4, 38.0)
Benzene		LOGTRIANGULAR(3.1, 15.0, 73.0)
Bromodichloromethane		SINGLE(0.0)
Butadiene (modelled as 1,3-Butadiene)		LOGUNIFORM(1.00E-30, 2.00E-02)
Butane		LOGTRIANGULAR(0.19, 1.0, 709.0)
Butene isomers		LOGTRIANGULAR(1.00E-03, 2.00E-01, 1.80E+00)
Butyric acid		LOGTRIANGULAR(1.00E-30, 1.00E-01, 1.75E+01)
Carbon disulphide		LOGUNIFORM(0.9, 170.0)
Carbon monoxide		LOGTRIANGULAR(0.11, 1.1, 5000.0)
Carbon tetrachloride (tetrachloromethane)		LOGUNIFORM(1.00E-30, 2.00E-02)
Carbonyl sulphide		LOGTRIANGULAR(0.006, 0.2, 4.4)
Chlorobenzene		LOGUNIFORM(0.002, 3000.0)
Chlorodifluoromethane		LOGTRIANGULAR(0.005, 0.1, 9900.0)
Chloroethane		LOGUNIFORM(1.00E-30, 5.30E+00)
Chlorofluorocarbons (CFCs) (Total)		LOGTRIANGULAR(0.06, 102.3, 1230.0)
Chlorofluoromethane		LOGTRIANGULAR(0.008, 0.2, 110.0)

Chloroform (trichloromethane)	LOGTRIANGULAR(1.00E-03, 2.00E-01, 7.00E+01)
Chlorotrifluoromethane	LOGTRIANGULAR(0.1, 0.2, 49.0)
Dichlorodifluoromethane	LOGTRIANGULAR(0.01, 9.0, 790.0)
Dichlorofluoromethane	LOGTRIANGULAR(1.00E-03, 1.00E-02, 6.02E+02)
Dichloromethane (methylene chloride)	LOGTRIANGULAR(1.00E-03, 2.00E-02, 1.52E+03)
Diethyl disulphide	LOGTRIANGULAR(1.00E-03, 2.00E-02, 2.60E+00)
Dimethyl disulphide	LOGTRIANGULAR(0.03, 0.17, 12.0)
Dimethyl sulphide	LOGTRIANGULAR(0.03, 0.73, 24.3)
Ethane	LOGTRIANGULAR(0.005, 6.25, 200.0)
Ethanethiol (ethyl mercaptan)	LOGUNIFORM(1.00E-30, 8.00E-02)
Ethanol	LOGTRIANGULAR(0.005, 0.2, 810.0)
Ethyl butyrate	LOGUNIFORM(0.41, 42.0)
Ethyl toluene (all isomers)	LOGTRIANGULAR(1.00E-03, 1.00E-02, 8.30E+00)
Ethylbenzene	LOGTRIANGULAR(1.00E-03, 1.00E-03, 8.75E+02)
Ethylene	UNIFORM(0.2, 5.8)
Ethylene dibromide	SINGLE(0.0)
Ethylene dichloride	LOGTRIANGULAR(0.006, 0.01, 1820.0)
Fluorotrichloromethane	LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.00E+03)
Formaldehyde (methanal)	LOGTRIANGULAR(0.026, 0.068, 0.188)
Freon 113	LOGTRIANGULAR(0.013, 4.8, 125.0)
Furan	LOGTRIANGULAR(0.02, 0.82, 6.2)
Halons	SINGLE(0.0)
Hexachlorocyclohexane (all isomers)	SINGLE(0.0)
Hexane	LOGTRIANGULAR(1.00E-03, 9.60E+00, 4.40E+01)
Hydrochlorofluorocarbons (HCFCs) (Total)	LOGTRIANGULAR(0.02, 128.8, 916.2)
Hydrofluorocarbons (HFCs) (Total)	SINGLE(0.0)
Hydrogen sulphide	LOGTRIANGULAR(10.0, 200.0, 750.0)
Limonene	LOGTRIANGULAR(1.00E-03, 1.00E-01, 2.40E+02)
Mercury	LOGUNIFORM(1.70E-04, 1.33E-03)
Methanethiol (methyl mercaptan)	LOGUNIFORM(1.00E-30, 3.00E-01)
Methyl chloride (chloromethane)	LOGTRIANGULAR(0.006, 0.2, 10.0)
Methyl chloroform (1,1,1-Trichloroethane)	LOGTRIANGULAR(1.00E-03, 1.80E+02, 1.60E+03)
Methyl ethyl ketone (2-butanone)	LOGTRIANGULAR(0.005, 0.005, 73.0)
Methyl isobutyl ketone	LOGTRIANGULAR(0.005, 0.2, 9.9)
Nitric acid	SINGLE(0.0)
Odour Units (Predicted)	TRIANGULAR(5.00E+04, 1.25E+05, 2.50E+05)
PAH (reported as Naphthalene)	LOGTRIANGULAR(1.00E-03, 2.00E-01, 1.70E+01)
para-Dichlorobenzene (modelled as 1,4-Dichlorobenzene)	LOGTRIANGULAR(0.006, 0.05, 2.7)
Pentane	LOGTRIANGULAR(0.02, 0.3, 105.0)
Pentene (all isomers)	LOGTRIANGULAR(0.24, 3.5, 12.0)
Perfluorocarbons (PFCs) (Total)	SINGLE(0.0)
Phenol	SINGLE(0.0)
PM10s	SINGLE(0.0)
Propane	LOGTRIANGULAR(1.00E-03, 1.90E+00, 1.29E+01)
Propanethiol	LOGUNIFORM(1.00E-30, 9.00E-02)
Sulphide, total simulations with H2S	LOGTRIANGULAR(1.00E-03, 2.40E+00, 5.58E+03)
Sulphide, total simulations without H2S	LOGTRIANGULAR(5.00E-04, 8.00E-03, 3.50E+00)
t-1,2-Dichloroethene	LOGTRIANGULAR(0.02, 0.24, 2.6)
Tetrachloroethane (modelled as 1,1,2,2-Tetrachloroethane)	LOGUNIFORM(1.00E-03, 5.00E+01)
Tetrachloroethylene (Tetrachloroethene)	LOGTRIANGULAR(1.00E-03, 1.00E-02, 7.70E+03)
Toluene	LOGTRIANGULAR(0.01, 0.1, 1250.0)
Trichlorobenzene (all isomers)	LOGTRIANGULAR(0.01, 0.01, 0.13)
Trichloroethylene (trichloroethene)	LOGTRIANGULAR(0.25, 1.65, 88.0)
Trichlorofluoromethane	LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.00E+03)
Trichlorotrifluoroethane	LOGTRIANGULAR(1.00E-03, 4.80E+00, 2.40E+01)
Trimethylbenzene (all isomers)	LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.87E+02)
Vinyl chloride (chloroethene, chloroethylene)	LOGTRIANGULAR(1.1, 31.0, 730.0)
Xylene (all isomers)	LOGTRIANGULAR(1.00E-03, 1.00E-03, 6.18E+04)
Justification:	[Default] Default Value
VOC Half-life	NORMAL(4.11, 1.56)
Justification:	[Default] Default Value

Waste Moisture Content

Degradation rate - Filling Phase	Wet
Justification:	[Changed] NRW Decision doc
Degradation rate - after change	Average
Justification:	[Default] Default Value
Waste Density	UNIFORM(0.8, 1.2)
Justification:	[Default] Default Value
Leachate Head	SINGLE(1.0)
Justification:	[Default] Default Value
Hydraulic Conductivity	LOGUNIFORM(1.00E-09, 1.00E-05)
Justification:	[Default] Default Value

Engineered Controls

Cap	Single Liner
Cap Thickness	SINGLE(1.00E-03)
Cap Hydraulic Conductivity	SINGLE(1.00E-11)
Justifications	
Cap	[Changed] Site design
Cap Thickness	[Changed] Site design
Cap Hydraulic Conductivity	[Changed] Site design
liner	Composite
First Layer:	
Liner Thickness	UNIFORM(0.45, 0.55)
Liner Hydraulic Conductivity	SINGLE(5.00E-10)
Second Layer:	

Liner 2 Thickness		SINGLE(0.002)
Liner 2 Hydraulic Conductivity		SINGLE(1.00E-12)
Justifications		
Liner	[Changed]	Site design
Liner Thickness	[Changed]	Site design
Liner Hydraulic Conductivity	[Changed]	Site design
Justification:	[Changed]	Default
Methane Oxidation %		SINGLE(10.0)
Justification:	[Default]	Default Value
Land Raise Depth		SINGLE(16.0)

Geosphere

Ground Surface (mAOD)		106
Water Table (mAOD)		88
Geosphere Moisture Content		UNIFORM(5.0, 20.0)
Geosphere Porosity		UNIFORM(24.0, 53.0)

Cell 3b

Infiltration		SINGLE(900.0)
Justification:	[Changed]	Met Office

Waste Input

Year		AmountDeposited (t)
2020		TRIANGULAR(1.49E+04, 1.65E+04, 1.82E+04)
2021		TRIANGULAR(5.29E+04, 5.88E+04, 6.47E+04)
2022		SINGLE(0.0)
2023		TRIANGULAR(6.78E+04, 7.53E+04, 8.29E+04)
Justification:	[Changed]	Cell Volume

Waste Breakdown

2020		
Inert		UNIFORM(15.0, 20.0)
User Defined 1		UNIFORM(80.0, 85.0)
2021		
Inert		UNIFORM(15.0, 20.0)
User Defined 1		UNIFORM(80.0, 85.0)
2022		
Inert		UNIFORM(15.0, 20.0)
User Defined 1		UNIFORM(80.0, 85.0)
2023		
Inert		UNIFORM(15.0, 20.0)
User Defined 1		UNIFORM(80.0, 85.0)
Justification:	[Default]	Client data

Trace Gases

<i>Source Gases</i>		Concentration [mg/m3]
1,1,1,2-Tetrafluorochloroethane		LOGTRIANGULAR(0.002, 0.2, 2.0)
1,1,1-Trichlorotrifluoroethane		LOGTRIANGULAR(0.005, 0.4, 8.0)
1,1,2-Trichloroethane		LOGTRIANGULAR(0.004, 1.0, 10.0)
1,1-Dichloroethane		LOGTRIANGULAR(0.02, 0.28, 3.9)
1,1-Dichloroethene		LOGTRIANGULAR(0.03, 2.8, 19.0)
1,1-Dichlorotetrafluoroethane		LOGTRIANGULAR(0.05, 0.25, 6.4)
1,2-Dichloropropane		SINGLE(0.0)
1,2-Dichlorotetrafluoroethane		LOGTRIANGULAR(0.01, 9.8, 300.0)
1-butanethiol		LOGUNIFORM(1.00E-30, 8.00E-02)
1-Chloro-1,1-difluoroethane		LOGTRIANGULAR(0.04, 0.57, 31.0)
2-butoxy ethanol		LOGUNIFORM(1.00E-30, 5.00E-02)
2-Chloro-1,1,1-trifluoroethane		LOGUNIFORM(0.05, 1.5)
2-Propanol		LOGTRIANGULAR(0.005, 2.0, 34.0)
Acetaldehyde (ethanal)		LOGUNIFORM(0.075, 2.546)
Acetone		LOGTRIANGULAR(0.005, 0.1, 50.0)
Acrylonitrile		LOGTRIANGULAR(0.02, 0.4, 38.0)
Benzene		LOGTRIANGULAR(3.1, 15.0, 73.0)
Bromodichloromethane		SINGLE(0.0)
Butadiene (modelled as 1,3-Butadiene)		LOGUNIFORM(1.00E-30, 2.00E-02)
Butane		LOGTRIANGULAR(0.19, 1.0, 709.0)
Butene isomers		LOGTRIANGULAR(1.00E-03, 2.00E-01, 1.80E+00)
Butyric acid		LOGTRIANGULAR(1.00E-30, 1.00E-01, 1.75E+01)
Carbon disulphide		LOGUNIFORM(0.9, 170.0)
Carbon monoxide		LOGTRIANGULAR(0.11, 1.1, 5000.0)
Carbon tetrachloride (tetrachloromethane)		LOGUNIFORM(1.00E-30, 2.00E-02)
Carbonyl sulphide		LOGTRIANGULAR(0.006, 0.2, 4.4)
Chlorobenzene		LOGUNIFORM(0.002, 3000.0)
Chlorodifluoromethane		LOGTRIANGULAR(0.005, 0.1, 9900.0)
Chloroethane		LOGUNIFORM(1.00E-30, 5.30E+00)
Chlorofluorocarbons (CFCs) (Total)		LOGTRIANGULAR(0.06, 102.3, 1230.0)
Chlorofluoromethane		LOGTRIANGULAR(0.008, 0.2, 110.0)
Chloroform (trichloromethane)		LOGTRIANGULAR(1.00E-03, 2.00E-01, 7.00E+01)
Chlorotrifluoromethane		LOGTRIANGULAR(0.1, 0.2, 49.0)
Dichlorodifluoromethane		LOGTRIANGULAR(0.01, 9.0, 790.0)
Dichlorofluoromethane		LOGTRIANGULAR(1.00E-03, 1.00E-02, 6.02E+02)
Dichloromethane (methylene chloride)		LOGTRIANGULAR(1.00E-03, 2.00E-02, 1.52E+03)
Diethyl disulphide		LOGTRIANGULAR(1.00E-03, 2.00E-02, 2.60E+00)
Dimethyl disulphide		LOGTRIANGULAR(0.03, 0.17, 12.0)
Dimethyl sulphide		LOGTRIANGULAR(0.03, 0.73, 24.3)
Ethane		LOGTRIANGULAR(0.005, 6.25, 200.0)
Ethanethiol (ethyl mercaptan)		LOGUNIFORM(1.00E-30, 8.00E-02)
Ethanol		LOGTRIANGULAR(0.005, 0.2, 810.0)
Ethyl butyrate		LOGUNIFORM(0.41, 42.0)
Ethyl toluene (all isomers)		LOGTRIANGULAR(1.00E-03, 1.00E-02, 8.30E+00)

Ethylbenzene	LOGTRIANGULAR(1.00E-03, 1.00E-03, 8.75E+02)
Ethylene	UNIFORM(0.2, 5.8)
Ethylene dibromide	SINGLE(0.0)
Ethylene dichloride	LOGTRIANGULAR(0.006, 0.01, 1820.0)
Fluorotrichloromethane	LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.00E+03)
Formaldehyde (methanal)	LOGTRIANGULAR(0.026, 0.068, 0.188)
Freon 113	LOGTRIANGULAR(0.013, 4.8, 125.0)
Furan	LOGTRIANGULAR(0.02, 0.82, 6.2)
Halons	SINGLE(0.0)
Hexachlorocyclohexane (all isomers)	SINGLE(0.0)
Hexane	LOGTRIANGULAR(1.00E-03, 9.60E+00, 4.40E+01)
Hydrochlorofluorocarbons (HCFCs) (Total)	LOGTRIANGULAR(0.02, 128.8, 916.2)
Hydrofluorocarbons (HFCs) (Total)	SINGLE(0.0)
Hydrogen sulphide	LOGTRIANGULAR(10.0, 200.0, 750.0)
Limonene	LOGTRIANGULAR(1.00E-03, 1.00E-01, 2.40E+02)
Mercury	LOGUNIFORM(1.70E-04, 1.33E-03)
Methanethiol (methyl mercaptan)	LOGUNIFORM(1.00E-30, 3.00E-01)
Methyl chloride (chloromethane)	LOGTRIANGULAR(0.006, 0.2, 10.0)
Methyl chloroform (1,1,1-Trichloroethane)	LOGTRIANGULAR(1.00E-03, 1.80E+02, 1.60E+03)
Methyl ethyl ketone (2-butanone)	LOGTRIANGULAR(0.005, 0.005, 73.0)
Methyl isobutyl ketone	LOGTRIANGULAR(0.005, 0.2, 9.9)
Nitric acid	SINGLE(0.0)
Odour Units (Predicted)	TRIANGULAR(5.00E+04, 1.25E+05, 2.50E+05)
PAH (reported as Naphthalene)	LOGTRIANGULAR(1.00E-03, 2.00E-01, 1.70E+01)
para-Dichlorobenzene (modelled as 1,4-Dichlorobenzene)	LOGTRIANGULAR(0.006, 0.05, 2.7)
Pentane	LOGTRIANGULAR(0.02, 0.3, 105.0)
Pentene (all isomers)	LOGTRIANGULAR(0.24, 3.5, 12.0)
Perfluorocarbons (PFCs) (Total)	SINGLE(0.0)
Phenol	SINGLE(0.0)
PM10s	SINGLE(0.0)
Propane	LOGTRIANGULAR(1.00E-03, 1.90E+00, 1.29E+01)
Propanethiol	LOGUNIFORM(1.00E-30, 9.00E-02)
Sulphide, total simulations with H2S	LOGTRIANGULAR(1.00E-03, 2.40E+00, 5.58E+03)
Sulphide, total simulations without H2S	LOGTRIANGULAR(5.00E-04, 8.00E-03, 3.50E+00)
t-1,2-Dichloroethene	LOGTRIANGULAR(0.02, 0.24, 2.6)
Tetrachloroethane (modelled as 1,1,2,2-Tetrachloroethane)	LOGUNIFORM(1.00E-03, 5.00E+01)
Tetrachloroethylene (Tetrachloroethene)	LOGTRIANGULAR(1.00E-03, 1.00E-02, 7.70E+03)
Toluene	LOGTRIANGULAR(0.01, 0.1, 1250.0)
Trichlorobenzene (all isomers)	LOGTRIANGULAR(0.01, 0.01, 0.13)
Trichloroethylene (trichloroethene)	LOGTRIANGULAR(0.25, 1.65, 88.0)
Trichlorofluoromethane	LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.00E+03)
Trichlorotrifluoroethane	LOGTRIANGULAR(1.00E-03, 4.80E+00, 2.40E+01)
Trimethylbenzene (all isomers)	LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.87E+02)
Vinyl chloride (chloroethene, chloroethylene)	LOGTRIANGULAR(1.1, 31.0, 730.0)
Xylene (all isomers)	LOGTRIANGULAR(1.00E-03, 1.00E-03, 6.18E+04)
Justification:	[Default] Default Value
VOC Half-life	NORMAL(4.11, 1.56)
Justification:	[Default] Default Value

Waste Moisture Content

Degradation rate - Filling Phase	Wet
Justification:	[Changed] NRW Decision doc
Degradation rate - after change	Average
Justification:	[Default] Default Value
Waste Density	UNIFORM(0.8, 1.2)
Justification:	[Default] Default Value
Leachate Head	SINGLE(1.0)
Justification:	[Default] Default Value
Hydraulic Conductivity	LOGUNIFORM(1.00E-09, 1.00E-05)
Justification:	[Default] Default Value

Engineered Controls

Cap	Single Liner
Cap Thickness	SINGLE(1.00E-03)
Cap Hydraulic Conductivity	SINGLE(1.00E-11)
Justifications	
Cap	[Changed] Site design
Cap Thickness	[Changed] Site design
Cap Hydraulic Conductivity	[Changed] Site design
liner	Composite
First Layer:	
Liner Thickness	UNIFORM(0.45, 0.55)
Liner Hydraulic Conductivity	SINGLE(5.00E-10)
Second Layer:	
Liner 2 Thickness	SINGLE(0.002)
Liner 2 Hydraulic Conductivity	SINGLE(1.00E-12)
Justifications	
Liner	[Changed] Site design
Liner Thickness	[Changed] Site design
Liner Hydraulic Conductivity	[Changed] Site design
Justification:	[Default] Default
Methane Oxidation %	SINGLE(10.0)
Justification:	[Default] Default Value
Land Raise Depth	SINGLE(16.0)

Geosphere

Ground Surface (mAOD)	106
Water Table (mAOD)	88

Geosphere Moisture Content	UNIFORM(5.0, 20.0)
Geosphere Porosity	UNIFORM(24.0, 53.0)

Cell 4a

Infiltration	SINGLE(900.0)
Justification:	[Changed] Met Office

Waste Input

Year	AmountDeposited (t)
2021	TRIANGULAR(4.26E+04, 4.73E+04, 5.20E+04)
Justification:	[Changed] Cell Volume

Waste Breakdown

2021	
Inert	UNIFORM(15.0, 20.0)
User Defined 1	UNIFORM(80.0, 85.0)
Justification:	[Default] Client data

Trace Gases

<i>Source Gases</i>	Concentration [mg/m3]
1,1,1,2-Tetrafluorochloroethane	LOGTRIANGULAR(0.002, 0.2, 2.0)
1,1,1-Trichlorotrifluoroethane	LOGTRIANGULAR(0.005, 0.4, 8.0)
1,1,2-Trichloroethane	LOGTRIANGULAR(0.004, 1.0, 10.0)
1,1-Dichloroethane	LOGTRIANGULAR(0.02, 0.28, 3.9)
1,1-Dichloroethene	LOGTRIANGULAR(0.03, 2.8, 19.0)
1,1-Dichlorotetrafluoroethane	LOGTRIANGULAR(0.05, 0.25, 6.4)
1,2-Dichloropropane	SINGLE(0.0)
1,2-Dichlorotetrafluoroethane	LOGTRIANGULAR(0.01, 9.8, 300.0)
1-butanethiol	LOGUNIFORM(1.00E-30, 8.00E-02)
1-Chloro-1,1-difluoroethane	LOGTRIANGULAR(0.04, 0.57, 31.0)
2-butoxy ethanol	LOGUNIFORM(1.00E-30, 5.00E-02)
2-Chloro-1,1,1-trifluoroethane	LOGUNIFORM(0.05, 1.5)
2-Propanol	LOGTRIANGULAR(0.005, 2.0, 34.0)
Acetalehyde (ethanal)	LOGUNIFORM(0.075, 2.546)
Acetone	LOGTRIANGULAR(0.005, 0.1, 50.0)
Acrylonitrile	LOGTRIANGULAR(0.02, 0.4, 38.0)
Benzene	LOGTRIANGULAR(3.1, 15.0, 73.0)
Bromodichloromethane	SINGLE(0.0)
Butadiene (modelled as 1,3-Butadiene)	LOGUNIFORM(1.00E-30, 2.00E-02)
Butane	LOGTRIANGULAR(0.19, 1.0, 709.0)
Butene isomers	LOGTRIANGULAR(1.00E-03, 2.00E-01, 1.80E+00)
Butyric acid	LOGTRIANGULAR(1.00E-30, 1.00E-01, 1.75E+01)
Carbon disulphide	LOGUNIFORM(0.9, 170.0)
Carbon monoxide	LOGTRIANGULAR(0.11, 1.1, 5000.0)
Carbon tetrachloride (tetrachloromethane)	LOGUNIFORM(1.00E-30, 2.00E-02)
Carbonyl sulphide	LOGTRIANGULAR(0.006, 0.2, 4.4)
Chlorobenzene	LOGUNIFORM(0.002, 3000.0)
Chlorodifluoromethane	LOGTRIANGULAR(0.005, 0.1, 9900.0)
Chloroethane	LOGUNIFORM(1.00E-30, 5.30E+00)
Chlorofluorocarbons (CFCs) (Total)	LOGTRIANGULAR(0.06, 102.3, 1230.0)
Chlorofluoromethane	LOGTRIANGULAR(0.008, 0.2, 110.0)
Chloroform (trichloromethane)	LOGTRIANGULAR(1.00E-03, 2.00E-01, 7.00E+01)
Chlorotrifluoromethane	LOGTRIANGULAR(0.1, 0.2, 49.0)
Dichlorodifluoromethane	LOGTRIANGULAR(0.01, 9.0, 790.0)
Dichlorofluoromethane	LOGTRIANGULAR(1.00E-03, 1.00E-02, 6.02E+02)
Dichloromethane (methylene chloride)	LOGTRIANGULAR(1.00E-03, 2.00E-02, 1.52E+03)
Diethyl disulphide	LOGTRIANGULAR(1.00E-03, 2.00E-02, 2.60E+00)
Dimethyl disulphide	LOGTRIANGULAR(0.03, 0.17, 12.0)
Dimethyl sulphide	LOGTRIANGULAR(0.03, 0.73, 24.3)
Ethane	LOGTRIANGULAR(0.005, 6.25, 200.0)
Ethanethiol (ethyl mercaptan)	LOGUNIFORM(1.00E-30, 8.00E-02)
Ethanol	LOGTRIANGULAR(0.005, 0.2, 810.0)
Ethyl butyrate	LOGUNIFORM(0.41, 42.0)
Ethyl toluene (all isomers)	LOGTRIANGULAR(1.00E-03, 1.00E-02, 8.30E+00)
Ethylbenzene	LOGTRIANGULAR(1.00E-03, 1.00E-03, 8.75E+02)
Ethylene	UNIFORM(0.2, 5.8)
Ethylene dibromide	SINGLE(0.0)
Ethylene dichloride	LOGTRIANGULAR(0.006, 0.01, 1820.0)
Fluorotrichloromethane	LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.00E+03)
Formaldehyde (methanal)	LOGTRIANGULAR(0.026, 0.068, 0.188)
Freon 113	LOGTRIANGULAR(0.013, 4.8, 125.0)
Furan	LOGTRIANGULAR(0.02, 0.82, 6.2)
Halons	SINGLE(0.0)
Hexachlorocyclohexane (all isomers)	SINGLE(0.0)
Hexane	LOGTRIANGULAR(1.00E-03, 9.60E+00, 4.40E+01)
Hydrochlorofluorocarbons (HCFCs) (Total)	LOGTRIANGULAR(0.02, 128.8, 916.2)
Hydrofluorocarbons (HFCs) (Total)	SINGLE(0.0)
Hydrogen sulphide	LOGTRIANGULAR(10.0, 200.0, 750.0)
Limonene	LOGTRIANGULAR(1.00E-03, 1.00E-01, 2.40E+02)
Mercury	LOGUNIFORM(1.70E-04, 1.33E-03)
Methanethiol (methyl mercaptan)	LOGUNIFORM(1.00E-30, 3.00E-01)
Methyl chloride (chloromethane)	LOGTRIANGULAR(0.006, 0.2, 10.0)
Methyl chloroform (1,1,1-Trichloroethane)	LOGTRIANGULAR(1.00E-03, 1.80E+02, 1.60E+03)
Methyl ethyl ketone (2-butanone)	LOGTRIANGULAR(0.005, 0.005, 73.0)
Methyl isobutyl ketone	LOGTRIANGULAR(0.005, 0.2, 9.9)
Nitric acid	SINGLE(0.0)
Odour Units (Predicted)	TRIANGULAR(5.00E+04, 1.25E+05, 2.50E+05)
PAH (reported as Naphthalene)	LOGTRIANGULAR(1.00E-03, 2.00E-01, 1.70E+01)
para-Dichlorobenzene (modelled as 1,4-Dichlorobenzene)	LOGTRIANGULAR(0.006, 0.05, 2.7)

Pentane		LOGTRIANGULAR(0.02, 0.3, 105.0)
Pentene (all isomers)		LOGTRIANGULAR(0.24, 3.5, 12.0)
Perfluorocarbons (PFCs) (Total)		SINGLE(0.0)
Phenol		SINGLE(0.0)
PM10s		SINGLE(0.0)
Propane		LOGTRIANGULAR(1.00E-03, 1.90E+00, 1.29E+01)
Propanethiol		LOGUNIFORM(1.00E-30, 9.00E-02)
Sulphide, total simulations with H2S		LOGTRIANGULAR(1.00E-03, 2.40E+00, 5.58E+03)
Sulphide, total simulations without H2S		LOGTRIANGULAR(5.00E-04, 8.00E-03, 3.50E+00)
t-1,2-Dichloroethene		LOGTRIANGULAR(0.02, 0.24, 2.6)
Tetrachloroethane (modelled as 1,1,2,2-Tetrachloroethane)		LOGUNIFORM(1.00E-03, 5.00E+01)
Tetrachloroethylene (Tetrachloroethene)		LOGTRIANGULAR(1.00E-03, 1.00E-02, 7.70E+03)
Toluene		LOGTRIANGULAR(0.01, 0.1, 1250.0)
Trichlorobenzene (all isomers)		LOGTRIANGULAR(0.01, 0.01, 0.13)
Trichloroethylene (trichloroethene)		LOGTRIANGULAR(0.25, 1.65, 88.0)
Trichlorofluoromethane		LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.00E+03)
Trichlorotrifluoroethane		LOGTRIANGULAR(1.00E-03, 4.80E+00, 2.40E+01)
Trimethylbenzene (all isomers)		LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.87E+02)
Vinyl chloride (chloroethene, chloroethylene)		LOGTRIANGULAR(1.1, 31.0, 730.0)
Xylene (all isomers)		LOGTRIANGULAR(1.00E-03, 1.00E-03, 6.18E+04)
Justification:	[Default]	Default Value
VOC Half-life		NORMAL(4.11, 1.56)
Justification:	[Default]	Default Value

Waste Moisture Content

Degradation rate - Filling Phase		Wet
Justification:	[Changed]	NRW Decision doc
Degradation rate - after change		Average
Justification:	[Default]	Default Value
Waste Density		UNIFORM(0.8, 1.2)
Justification:	[Default]	Default Value
Leachate Head		SINGLE(1.0)
Justification:	[Default]	Default Value
Hydraulic Conductivity		LOGUNIFORM(1.00E-09, 1.00E-05)
Justification:	[Default]	Default Value

Engineered Controls

Cap		Single Liner
Cap Thickness		SINGLE(1.00E-03)
Cap Hydraulic Conductivity		SINGLE(1.00E-11)
Justifications		
Cap	[Changed]	Site design
Cap Thickness	[Changed]	Site design
Cap Hydraulic Conductivity	[Changed]	Site design
liner		Composite
First Layer:		
Liner Thickness		UNIFORM(0.45, 0.55)
Liner Hydraulic Conductivity		SINGLE(5.00E-10)
Second Layer:		
Liner 2 Thickness		SINGLE(0.002)
Liner 2 Hydraulic Conductivity		SINGLE(1.00E-12)
Justifications		
Liner	[Changed]	Site design
Liner Thickness	[Changed]	Site design
Liner Hydraulic Conductivity	[Changed]	Site design
Justification:	[Default]	Default
Methane Oxidation %		SINGLE(10.0)
Justification:	[Default]	Default Value
Land Raise Depth		SINGLE(16.0)

Geosphere

Ground Surface (mAOD)		106
Water Table (mAOD)		88
Geosphere Moisture Content		UNIFORM(5.0, 20.0)
Geosphere Porosity		UNIFORM(24.0, 53.0)

Cell 4b

Infiltration		SINGLE(900.0)
Justification:	[Changed]	Met Office

Waste Input

Year		Amount Deposited (t)
2021		TRIANGULAR(4.96E+04, 5.52E+04, 6.07E+04)
2022		TRIANGULAR(4.96E+04, 5.52E+04, 6.07E+04)
Justification:	[Changed]	Cell Volume

Waste Breakdown

2021		
Inert		UNIFORM(15.0, 20.0)
User Defined 1		UNIFORM(80.0, 85.0)
2022		
Inert		UNIFORM(15.0, 20.0)
User Defined 1		UNIFORM(80.0, 85.0)
Justification:	[Default]	Client data

Trace Gases

Source Gases		Concentration [mg/m3]
1,1,1,2-Tetrafluorochloroethane		LOGTRIANGULAR(0.002, 0.2, 2.0)
1,1,1-Trichlorotrifluoroethane		LOGTRIANGULAR(0.005, 0.4, 8.0)
1,1,2-Trichloroethane		LOGTRIANGULAR(0.004, 1.0, 10.0)
1,1-Dichloroethane		LOGTRIANGULAR(0.02, 0.28, 3.9)

1,1-Dichloroethene	LOGTRIANGULAR(0.03, 2.8, 19.0)
1,1-Dichlorotetrafluoroethane	LOGTRIANGULAR(0.05, 0.25, 6.4)
1,2-Dichloropropane	SINGLE(0.0)
1,2-Dichlorotetrafluoroethane	LOGTRIANGULAR(0.01, 9.8, 300.0)
1-butanethiol	LOGUNIFORM(1.00E-30, 8.00E-02)
1-Chloro-1,1-difluoroethane	LOGTRIANGULAR(0.04, 0.57, 31.0)
2-butoxy ethanol	LOGUNIFORM(1.00E-30, 5.00E-02)
2-Chloro-1,1,1-trifluoroethane	LOGUNIFORM(0.05, 1.5)
2-Propanol	LOGTRIANGULAR(0.005, 2.0, 34.0)
Acetaldehyde (ethanal)	LOGUNIFORM(0.075, 2.546)
Acetone	LOGTRIANGULAR(0.005, 0.1, 50.0)
Acrylonitrile	LOGTRIANGULAR(0.02, 0.4, 38.0)
Benzene	LOGTRIANGULAR(3.1, 15.0, 73.0)
Bromodichloromethane	SINGLE(0.0)
Butadiene (modelled as 1,3-Butadiene)	LOGUNIFORM(1.00E-30, 2.00E-02)
Butane	LOGTRIANGULAR(0.19, 1.0, 709.0)
Butene isomers	LOGTRIANGULAR(1.00E-03, 2.00E-01, 1.80E+00)
Butyric acid	LOGTRIANGULAR(1.00E-30, 1.00E-01, 1.75E+01)
Carbon disulphide	LOGUNIFORM(0.9, 170.0)
Carbon monoxide	LOGTRIANGULAR(0.11, 1.1, 5000.0)
Carbon tetrachloride (tetrachloromethane)	LOGUNIFORM(1.00E-30, 2.00E-02)
Carbonyl sulphide	LOGTRIANGULAR(0.006, 0.2, 4.4)
Chlorobenzene	LOGUNIFORM(0.002, 3000.0)
Chlorodifluoromethane	LOGTRIANGULAR(0.005, 0.1, 9900.0)
Chloroethane	LOGUNIFORM(1.00E-30, 5.30E+00)
Chlorofluorocarbons (CFCs) (Total)	LOGTRIANGULAR(0.06, 102.3, 1230.0)
Chlorofluoromethane	LOGTRIANGULAR(0.008, 0.2, 110.0)
Chloroform (trichloromethane)	LOGTRIANGULAR(1.00E-03, 2.00E-01, 7.00E+01)
Chlorotrifluoromethane	LOGTRIANGULAR(0.1, 0.2, 49.0)
Dichlorodifluoromethane	LOGTRIANGULAR(0.01, 9.0, 790.0)
Dichlorofluoromethane	LOGTRIANGULAR(1.00E-03, 1.00E-02, 6.02E+02)
Dichloromethane (methylene chloride)	LOGTRIANGULAR(1.00E-03, 2.00E-02, 1.52E+03)
Diethyl disulphide	LOGTRIANGULAR(1.00E-03, 2.00E-02, 2.60E+00)
Dimethyl disulphide	LOGTRIANGULAR(0.03, 0.17, 12.0)
Dimethyl sulphide	LOGTRIANGULAR(0.03, 0.73, 24.3)
Ethane	LOGTRIANGULAR(0.005, 6.25, 200.0)
Ethanethiol (ethyl mercaptan)	LOGUNIFORM(1.00E-30, 8.00E-02)
Ethanol	LOGTRIANGULAR(0.005, 0.2, 810.0)
Ethyl butyrate	LOGUNIFORM(0.41, 42.0)
Ethyl toluene (all isomers)	LOGTRIANGULAR(1.00E-03, 1.00E-02, 8.30E+00)
Ethylbenzene	LOGTRIANGULAR(1.00E-03, 1.00E-03, 8.75E+02)
Ethylene	UNIFORM(0.2, 5.8)
Ethylene dibromide	SINGLE(0.0)
Ethylene dichloride	LOGTRIANGULAR(0.006, 0.01, 1820.0)
Fluorotrichloromethane	LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.00E+03)
Formaldehyde (methanal)	LOGTRIANGULAR(0.026, 0.068, 0.188)
Freon 113	LOGTRIANGULAR(0.013, 4.8, 125.0)
Furan	LOGTRIANGULAR(0.02, 0.82, 6.2)
Halons	SINGLE(0.0)
Hexachlorocyclohexane (all isomers)	SINGLE(0.0)
Hexane	LOGTRIANGULAR(1.00E-03, 9.60E+00, 4.40E+01)
Hydrochlorofluorocarbons (HCFCs) (Total)	LOGTRIANGULAR(0.02, 128.8, 916.2)
Hydrofluorocarbons (HFCs) (Total)	SINGLE(0.0)
Hydrogen sulphide	LOGTRIANGULAR(10.0, 200.0, 750.0)
Limonene	LOGTRIANGULAR(1.00E-03, 1.00E-01, 2.40E+02)
Mercury	LOGUNIFORM(1.70E-04, 1.33E-03)
Methanethiol (methyl mercaptan)	LOGUNIFORM(1.00E-30, 3.00E-01)
Methyl chloride (chloromethane)	LOGTRIANGULAR(0.006, 0.2, 10.0)
Methyl chloroform (1,1,1-Trichloroethane)	LOGTRIANGULAR(1.00E-03, 1.80E+02, 1.60E+03)
Methyl ethyl ketone (2-butanone)	LOGTRIANGULAR(0.005, 0.005, 73.0)
Methyl isobutyl ketone	LOGTRIANGULAR(0.005, 0.2, 9.9)
Nitric acid	SINGLE(0.0)
Odour Units (Predicted)	TRIANGULAR(5.00E+04, 1.25E+05, 2.50E+05)
PAH (reported as Naphthalene)	LOGTRIANGULAR(1.00E-03, 2.00E-01, 1.70E+01)
para-Dichlorobenzene (modelled as 1,4-Dichlorobenzene)	LOGTRIANGULAR(0.006, 0.05, 2.7)
Pentane	LOGTRIANGULAR(0.02, 0.3, 105.0)
Pentene (all isomers)	LOGTRIANGULAR(0.24, 3.5, 12.0)
Perfluorocarbons (PFCs) (Total)	SINGLE(0.0)
Phenol	SINGLE(0.0)
PM10s	SINGLE(0.0)
Propane	LOGTRIANGULAR(1.00E-03, 1.90E+00, 1.29E+01)
Propanethiol	LOGUNIFORM(1.00E-30, 9.00E-02)
Sulphide, total simulations with H2S	LOGTRIANGULAR(1.00E-03, 2.40E+00, 5.58E+03)
Sulphide, total simulations without H2S	LOGTRIANGULAR(5.00E-04, 8.00E-03, 3.50E+00)
t-1,2-Dichloroethene	LOGTRIANGULAR(0.02, 0.24, 2.6)
Tetrachloroethane (modelled as 1,1,2,2-Tetrachloroethane)	LOGUNIFORM(1.00E-03, 5.00E+01)
Tetrachloroethylene (Tetrachloroethene)	LOGTRIANGULAR(1.00E-03, 1.00E-02, 7.70E+03)
Toluene	LOGTRIANGULAR(0.01, 0.1, 1250.0)
Trichlorobenzene (all isomers)	LOGTRIANGULAR(0.01, 0.01, 0.13)
Trichloroethylene (trichloroethene)	LOGTRIANGULAR(0.25, 1.65, 88.0)
Trichlorofluoromethane	LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.00E+03)
Trichlorotrifluoroethane	LOGTRIANGULAR(1.00E-03, 4.80E+00, 2.40E+01)
Trimethylbenzene (all isomers)	LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.87E+02)
Vinyl chloride (chloroethene, chloroethylene)	LOGTRIANGULAR(1.1, 31.0, 730.0)
Xylene (all isomers)	LOGTRIANGULAR(1.00E-03, 1.00E-03, 6.18E+04)
Justification:	[Default] Default Value

VOC Halflife		NORMAL(4.11, 1.56)
Justification:	[Default]	Default Value
Waste Moisture Content		
Degradation rate - Filling Phase		Wet
Justification:	[Changed]	NRW Decision doc
Degradation rate - after change		Average
Justification:	[Default]	Default Value
Waste Density		UNIFORM(0.8, 1.2)
Justification:	[Default]	Default Value
Leachate Head		SINGLE(1.0)
Justification:	[Default]	Default Value
Hydraulic Conductivity		LOGUNIFORM(1.00E-09, 1.00E-05)
Justification:	[Default]	Default Value
Engineered Controls		
Cap		Single Liner
Cap Thickness		SINGLE(1.00E-03)
Cap Hydraulic Conductivity		SINGLE(1.00E-11)
Justifications		
Cap	[Changed]	Site design
Cap Thickness	[Changed]	Site design
Cap Hydraulic Conductivit	[Changed]	Site design
liner		Composite
First Layer:		
Liner Thickness		UNIFORM(0.45, 0.55)
Liner Hydraulic Conductivity		SINGLE(5.00E-10)
Second Layer:		
Liner 2 Thickness		SINGLE(0.002)
Liner 2 Hydraulic Conductivity		SINGLE(1.00E-12)
Justifications		
Liner	[Changed]	Site design
Liner Thickness	[Changed]	Site design
Liner Hydraulic Conductivi	[Changed]	Site design
Justification:	[Changed]	Default
Methane Oxidation %		SINGLE(10.0)
Justification:	[Default]	Default Value
Land Raise Depth		SINGLE(16.0)
Geosphere		
Ground Surface (mAOD)		106
Water Table (mAOD)		88
Geosphere Moisture Content		UNIFORM(5.0, 20.0)
Geosphere Porosity		UNIFORM(24.0, 53.0)
Cell 5a		
Infiltration		SINGLE(900.0)
Justification:	[Changed]	Met Office
Waste Input		
Year		AmountDeposited (t)
2021		TRIANGULAR(5.71E+04, 6.34E+04, 6.98E+04)
Justification:	[Changed]	Cell Volume
Waste Breakdown		
2021		
Inert		UNIFORM(15.0, 20.0)
User Defined 1		UNIFORM(80.0, 85.0)
Justification:	[Default]	Client data
Trace Gases		
Source Gases		Concentration [mg/m3]
1,1,1,2-Tetrafluorochloroethane		LOGTRIANGULAR(0.002, 0.2, 2.0)
1,1,1-Trichlorotrifluoroethane		LOGTRIANGULAR(0.005, 0.4, 8.0)
1,1,2-Trichloroethane		LOGTRIANGULAR(0.004, 1.0, 10.0)
1,1-Dichloroethane		LOGTRIANGULAR(0.02, 0.28, 3.9)
1,1-Dichloroethene		LOGTRIANGULAR(0.03, 2.8, 19.0)
1,1-Dichlorotetrafluoroethane		LOGTRIANGULAR(0.05, 0.25, 6.4)
1,2-Dichloropropane		SINGLE(0.0)
1,2-Dichlorotetrafluoroethane		LOGTRIANGULAR(0.01, 9.8, 300.0)
1-butanethiol		LOGUNIFORM(1.00E-30, 8.00E-02)
1-Chloro-1,1-difluoroethane		LOGTRIANGULAR(0.04, 0.57, 31.0)
2-butoxy ethanol		LOGUNIFORM(1.00E-30, 5.00E-02)
2-Chloro-1,1,1-trifluoroethane		LOGUNIFORM(0.05, 1.5)
2-Propanol		LOGTRIANGULAR(0.005, 2.0, 34.0)
Acetalehyde (ethanal)		LOGUNIFORM(0.075, 2.546)
Acetone		LOGTRIANGULAR(0.005, 0.1, 50.0)
Acrylonitrile		LOGTRIANGULAR(0.02, 0.4, 38.0)
Benzene		LOGTRIANGULAR(3.1, 15.0, 73.0)
Bromodichloromethane		SINGLE(0.0)
Butadiene (modelled as 1,3-Butadiene)		LOGUNIFORM(1.00E-30, 2.00E-02)
Butane		LOGTRIANGULAR(0.19, 1.0, 709.0)
Butene isomers		LOGTRIANGULAR(1.00E-03, 2.00E-01, 1.80E+00)
Butyric acid		LOGTRIANGULAR(1.00E-30, 1.00E-01, 1.75E+01)
Carbon disulphide		LOGUNIFORM(0.9, 170.0)
Carbon monoxide		LOGTRIANGULAR(0.11, 1.1, 5000.0)
Carbon tetrachloride (tetrachloromethane)		LOGUNIFORM(1.00E-30, 2.00E-02)
Carbonyl sulphide		LOGTRIANGULAR(0.006, 0.2, 4.4)
Chlorobenzene		LOGUNIFORM(0.002, 3000.0)
Chlorodifluoromethane		LOGTRIANGULAR(0.005, 0.1, 9900.0)
Chloroethane		LOGUNIFORM(1.00E-30, 5.30E+00)
Chlorofluorocarbons (CFCs) (Total)		LOGTRIANGULAR(0.06, 102.3, 1230.0)

Chlorofluoromethane		LOGTRIANGULAR(0.008, 0.2, 110.0)
Chloroform (trichloromethane)		LOGTRIANGULAR(1.00E-03, 2.00E-01, 7.00E+01)
Chlorotrifluoromethane		LOGTRIANGULAR(0.1, 0.2, 49.0)
Dichlorodifluoromethane		LOGTRIANGULAR(0.01, 9.0, 790.0)
Dichlorofluoromethane		LOGTRIANGULAR(1.00E-03, 1.00E-02, 6.02E+02)
Dichloromethane (methylene chloride)		LOGTRIANGULAR(1.00E-03, 2.00E-02, 1.52E+03)
Diethyl disulphide		LOGTRIANGULAR(1.00E-03, 2.00E-02, 2.60E+00)
Dimethyl disulphide		LOGTRIANGULAR(0.03, 0.17, 12.0)
Dimethyl sulphide		LOGTRIANGULAR(0.03, 0.73, 24.3)
Ethane		LOGTRIANGULAR(0.005, 6.25, 200.0)
Ethanethiol (ethyl mercaptan)		LOGUNIFORM(1.00E-30, 8.00E-02)
Ethanol		LOGTRIANGULAR(0.005, 0.2, 810.0)
Ethyl butyrate		LOGUNIFORM(0.41, 42.0)
Ethyl toluene (all isomers)		LOGTRIANGULAR(1.00E-03, 1.00E-02, 8.30E+00)
Ethylbenzene		LOGTRIANGULAR(1.00E-03, 1.00E-03, 8.75E+02)
Ethylene		UNIFORM(0.2, 5.8)
Ethylene dibromide		SINGLE(0.0)
Ethylene dichloride		LOGTRIANGULAR(0.006, 0.01, 1820.0)
Fluorotrichloromethane		LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.00E+03)
Formaldehyde (methanal)		LOGTRIANGULAR(0.026, 0.068, 0.188)
Freon 113		LOGTRIANGULAR(0.013, 4.8, 125.0)
Furan		LOGTRIANGULAR(0.02, 0.82, 6.2)
Halons		SINGLE(0.0)
Hexachlorocyclohexane (all isomers)		SINGLE(0.0)
Hexane		LOGTRIANGULAR(1.00E-03, 9.60E+00, 4.40E+01)
Hydrochlorofluorocarbons (HCFCs) (Total)		LOGTRIANGULAR(0.02, 128.8, 916.2)
Hydrofluorocarbons (HFCs) (Total)		SINGLE(0.0)
Hydrogen sulphide		LOGTRIANGULAR(10.0, 200.0, 750.0)
Limonene		LOGTRIANGULAR(1.00E-03, 1.00E-01, 2.40E+02)
Mercury		LOGUNIFORM(1.70E-04, 1.33E-03)
Methanethiol (methyl mercaptan)		LOGUNIFORM(1.00E-30, 3.00E-01)
Methyl chloride (chloromethane)		LOGTRIANGULAR(0.006, 0.2, 10.0)
Methyl chloroform (1,1,1-Trichloroethane)		LOGTRIANGULAR(1.00E-03, 1.80E+02, 1.60E+03)
Methyl ethyl ketone (2-butanone)		LOGTRIANGULAR(0.005, 0.005, 73.0)
Methyl isobutyl ketone		LOGTRIANGULAR(0.005, 0.2, 9.9)
Nitric acid		SINGLE(0.0)
Odour Units (Predicted)		TRIANGULAR(5.00E+04, 1.25E+05, 2.50E+05)
PAH (reported as Naphthalene)		LOGTRIANGULAR(1.00E-03, 2.00E-01, 1.70E+01)
para-Dichlorobenzene (modelled as 1,4-Dichlorobenzene)		LOGTRIANGULAR(0.006, 0.05, 2.7)
Pentane		LOGTRIANGULAR(0.02, 0.3, 105.0)
Pentene (all isomers)		LOGTRIANGULAR(0.24, 3.5, 12.0)
Perfluorocarbons (PFCs) (Total)		SINGLE(0.0)
Phenol		SINGLE(0.0)
PM10s		SINGLE(0.0)
Propane		LOGTRIANGULAR(1.00E-03, 1.90E+00, 1.29E+01)
Propanethiol		LOGUNIFORM(1.00E-30, 9.00E-02)
Sulphide, total simulations with H2S		LOGTRIANGULAR(1.00E-03, 2.40E+00, 5.58E+03)
Sulphide, total simulations without H2S		LOGTRIANGULAR(5.00E-04, 8.00E-03, 3.50E+00)
t-1,2-Dichloroethene		LOGTRIANGULAR(0.02, 0.24, 2.6)
Tetrachloroethane (modelled as 1,1,2,2-Tetrachloroethane)		LOGUNIFORM(1.00E-03, 5.00E+01)
Tetrachloroethylene (Tetrachloroethene)		LOGTRIANGULAR(1.00E-03, 1.00E-02, 7.70E+03)
Toluene		LOGTRIANGULAR(0.01, 0.1, 1250.0)
Trichlorobenzene (all isomers)		LOGTRIANGULAR(0.01, 0.01, 0.13)
Trichloroethylene (trichloroethene)		LOGTRIANGULAR(0.25, 1.65, 88.0)
Trichlorofluoromethane		LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.00E+03)
Trichlorotrifluoroethane		LOGTRIANGULAR(1.00E-03, 4.80E+00, 2.40E+01)
Trimethylbenzene (all isomers)		LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.87E+02)
Vinyl chloride (chloroethene, chloroethylene)		LOGTRIANGULAR(1.1, 31.0, 730.0)
Xylene (all isomers)		LOGTRIANGULAR(1.00E-03, 1.00E-03, 6.18E+04)
Justification:	[Default]	Default Value
VOC Halflife		NORMAL(4.11, 1.56)
Justification:	[Default]	Default Value

Waste Moisture Content

Degradation rate - Filling Phase		Wet
Justification:	[Changed]	NRW Decision doc
Degradation rate - after change		Average
Justification:	[Default]	Default Value
Waste Density		UNIFORM(0.8, 1.2)
Justification:	[Default]	Default Value
Leachate Head		SINGLE(1.0)
Justification:	[Default]	Default Value
Hydraulic Conductivity		LOGUNIFORM(1.00E-09, 1.00E-05)
Justification:	[Default]	Default Value

Engineered Controls

Cap		Single Liner
Cap Thickness		SINGLE(1.00E-03)
Cap Hydraulic Conductivity		SINGLE(1.00E-11)
Justifications		
Cap	[Changed]	Site design
Cap Thickness	[Changed]	Site design
Cap Hydraulic Conductivity	[Changed]	Site design
liner		Composite
First Layer:		
Liner Thickness		UNIFORM(0.45, 0.55)
Liner Hydraulic Conductivity		SINGLE(5.00E-10)

Second Layer:		
Liner 2 Thickness		SINGLE(0.002)
Liner 2 Hydraulic Conductivity		SINGLE(1.00E-12)
Justifications		
Liner	[Changed]	Site design
Liner Thickness	[Changed]	Site design
Liner Hydraulic Conductivity	[Changed]	Site design
Justification:	[Changed]	Default
Methane Oxidation %		SINGLE(10.0)
Justification:	[Default]	Default Value
Land Raise Depth		SINGLE(16.0)
Geosphere		
Ground Surface (mAOD)		106
Water Table (mAOD)		88
Geosphere Moisture Content		UNIFORM(5.0, 20.0)
Geosphere Porosity		UNIFORM(24.0, 53.0)
Cell 5b		
Infiltration		SINGLE(900.0)
Justification:	[Changed]	Met Office
Waste Input		
Year		AmountDeposited (t)
2021		TRIANGULAR(6.66E+04, 7.40E+04, 8.14E+04)
2022		TRIANGULAR(6.66E+04, 7.40E+04, 8.14E+04)
Justification:	[Changed]	Cell Volume
Waste Breakdown		
2021		
Inert		UNIFORM(15.0, 20.0)
User Defined 1		UNIFORM(80.0, 85.0)
2022		
Inert		UNIFORM(15.0, 20.0)
User Defined 1		UNIFORM(80.0, 85.0)
Justification:	[Default]	Client data
Trace Gases		
Source Gases		Concentration [mg/m3]
1,1,1,2-Tetrafluorochloroethane		LOGTRIANGULAR(0.002, 0.2, 2.0)
1,1,1-Trichlorotrifluoroethane		LOGTRIANGULAR(0.005, 0.4, 8.0)
1,1,2-Trichloroethane		LOGTRIANGULAR(0.004, 1.0, 10.0)
1,1-Dichloroethane		LOGTRIANGULAR(0.02, 0.28, 3.9)
1,1-Dichloroethene		LOGTRIANGULAR(0.03, 2.8, 19.0)
1,1-Dichlorotetrafluoroethane		LOGTRIANGULAR(0.05, 0.25, 6.4)
1,2-Dichloropropane		SINGLE(0.0)
1,2-Dichlorotetrafluoroethane		LOGTRIANGULAR(0.01, 9.8, 300.0)
1-butanethiol		LOGUNIFORM(1.00E-30, 8.00E-02)
1-Chloro-1,1-difluoroethane		LOGTRIANGULAR(0.04, 0.57, 31.0)
2-butoxy ethanol		LOGUNIFORM(1.00E-30, 5.00E-02)
2-Chloro-1,1,1-trifluoroethane		LOGUNIFORM(0.05, 1.5)
2-Propanol		LOGTRIANGULAR(0.005, 2.0, 34.0)
Acetaldehyde (ethanal)		LOGUNIFORM(0.075, 2.546)
Acetone		LOGTRIANGULAR(0.005, 0.1, 50.0)
Acrylonitrile		LOGTRIANGULAR(0.02, 0.4, 38.0)
Benzene		LOGTRIANGULAR(3.1, 15.0, 73.0)
Bromodichloromethane		SINGLE(0.0)
Butadiene (modelled as 1,3-Butadiene)		LOGUNIFORM(1.00E-30, 2.00E-02)
Butane		LOGTRIANGULAR(0.19, 1.0, 709.0)
Butene isomers		LOGTRIANGULAR(1.00E-03, 2.00E-01, 1.80E+00)
Butyric acid		LOGTRIANGULAR(1.00E-30, 1.00E-01, 1.75E+01)
Carbon disulphide		LOGUNIFORM(0.9, 170.0)
Carbon monoxide		LOGTRIANGULAR(0.11, 1.1, 5000.0)
Carbon tetrachloride (tetrachloromethane)		LOGUNIFORM(1.00E-30, 2.00E-02)
Carbonyl sulphide		LOGTRIANGULAR(0.006, 0.2, 4.4)
Chlorobenzene		LOGUNIFORM(0.002, 3000.0)
Chlorodifluoromethane		LOGTRIANGULAR(0.005, 0.1, 9900.0)
Chloroethane		LOGUNIFORM(1.00E-30, 5.30E+00)
Chlorofluorocarbons (CFCs) (Total)		LOGTRIANGULAR(0.06, 102.3, 1230.0)
Chlorofluoromethane		LOGTRIANGULAR(0.008, 0.2, 110.0)
Chloroform (trichloromethane)		LOGTRIANGULAR(1.00E-03, 2.00E-01, 7.00E+01)
Chlorotrifluoromethane		LOGTRIANGULAR(0.1, 0.2, 49.0)
Dichlorodifluoromethane		LOGTRIANGULAR(0.01, 9.0, 790.0)
Dichlorofluoromethane		LOGTRIANGULAR(1.00E-03, 1.00E-02, 6.02E+02)
Dichloromethane (methylene chloride)		LOGTRIANGULAR(1.00E-03, 2.00E-02, 1.52E+03)
Diethyl disulphide		LOGTRIANGULAR(1.00E-03, 2.00E-02, 2.60E+00)
Dimethyl disulphide		LOGTRIANGULAR(0.03, 0.17, 12.0)
Dimethyl sulphide		LOGTRIANGULAR(0.03, 0.73, 24.3)
Ethane		LOGTRIANGULAR(0.005, 6.25, 200.0)
Ethanethiol (ethyl mercaptan)		LOGUNIFORM(1.00E-30, 8.00E-02)
Ethanol		LOGTRIANGULAR(0.005, 0.2, 810.0)
Ethyl butyrate		LOGUNIFORM(0.41, 42.0)
Ethyl toluene (all isomers)		LOGTRIANGULAR(1.00E-03, 1.00E-02, 8.30E+00)
Ethylbenzene		LOGTRIANGULAR(1.00E-03, 1.00E-03, 8.75E+02)
Ethylene		UNIFORM(0.2, 5.8)
Ethylene dibromide		SINGLE(0.0)
Ethylene dichloride		LOGTRIANGULAR(0.006, 0.01, 1820.0)
Fluorotrichloromethane		LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.00E+03)
Formaldehyde (methanal)		LOGTRIANGULAR(0.026, 0.068, 0.188)
Freon 113		LOGTRIANGULAR(0.013, 4.8, 125.0)

Furan		LOGTRIANGULAR(0.02, 0.82, 6.2)
Halons		SINGLE(0.0)
Hexachlorocyclohexane (all isomers)		SINGLE(0.0)
Hexane		LOGTRIANGULAR(1.00E-03, 9.60E+00, 4.40E+01)
Hydrochlorofluorocarbons (HCFCs) (Total)		LOGTRIANGULAR(0.02, 128.8, 916.2)
Hydrofluorocarbons (HFCs) (Total)		SINGLE(0.0)
Hydrogen sulphide		LOGTRIANGULAR(10.0, 200.0, 750.0)
Limonene		LOGTRIANGULAR(1.00E-03, 1.00E-01, 2.40E+02)
Mercury		LOGUNIFORM(1.70E-04, 1.33E-03)
Methanethiol (methyl mercaptan)		LOGUNIFORM(1.00E-30, 3.00E-01)
Methyl chloride (chloromethane)		LOGTRIANGULAR(0.006, 0.2, 10.0)
Methyl chloroform (1,1,1-Trichloroethane)		LOGTRIANGULAR(1.00E-03, 1.80E+02, 1.60E+03)
Methyl ethyl ketone (2-butanone)		LOGTRIANGULAR(0.005, 0.005, 73.0)
Methyl isobutyl ketone		LOGTRIANGULAR(0.005, 0.2, 9.9)
Nitric acid		SINGLE(0.0)
Odour Units (Predicted)		TRIANGULAR(5.00E+04, 1.25E+05, 2.50E+05)
PAH (reported as Naphthalene)		LOGTRIANGULAR(1.00E-03, 2.00E-01, 1.70E+01)
para-Dichlorobenzene (modelled as 1,4-Dichlorobenzene)		LOGTRIANGULAR(0.006, 0.05, 2.7)
Pentane		LOGTRIANGULAR(0.02, 0.3, 105.0)
Pentene (all isomers)		LOGTRIANGULAR(0.24, 3.5, 12.0)
Perfluorocarbons (PFCs) (Total)		SINGLE(0.0)
Phenol		SINGLE(0.0)
PM10s		SINGLE(0.0)
Propane		LOGTRIANGULAR(1.00E-03, 1.90E+00, 1.29E+01)
Propanethiol		LOGUNIFORM(1.00E-30, 9.00E-02)
Sulphide, total simulations with H2S		LOGTRIANGULAR(1.00E-03, 2.40E+00, 5.58E+03)
Sulphide, total simulations without H2S		LOGTRIANGULAR(5.00E-04, 8.00E-03, 3.50E+00)
t-1,2-Dichloroethene		LOGTRIANGULAR(0.02, 0.24, 2.6)
Tetrachloroethane (modelled as 1,1,2,2-Tetrachloroethane)		LOGUNIFORM(1.00E-03, 5.00E+01)
Tetrachloroethylene (Tetrachloroethene)		LOGTRIANGULAR(1.00E-03, 1.00E-02, 7.70E+03)
Toluene		LOGTRIANGULAR(0.01, 0.1, 1250.0)
Trichlorobenzene (all isomers)		LOGTRIANGULAR(0.01, 0.01, 0.13)
Trichloroethylene (trichloroethene)		LOGTRIANGULAR(0.25, 1.65, 88.0)
Trichlorofluoromethane		LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.00E+03)
Trichlorotrifluoroethane		LOGTRIANGULAR(1.00E-03, 4.80E+00, 2.40E+01)
Trimethylbenzene (all isomers)		LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.87E+02)
Vinyl chloride (chloroethene, chloroethylene)		LOGTRIANGULAR(1.1, 31.0, 730.0)
Xylene (all isomers)		LOGTRIANGULAR(1.00E-03, 1.00E-03, 6.18E+04)
Justification:	[Default]	Default Value
VOC Half-life		NORMAL(4.11, 1.56)
Justification:	[Default]	Default Value

Waste Moisture Content

Degradation rate - Filling Phase		Wet
Justification:	[Changed]	NRW Decision doc
Degradation rate - after change		Average
Justification:	[Default]	Default Value
Waste Density		UNIFORM(0.8, 1.2)
Justification:	[Default]	Default Value
Leachate Head		SINGLE(1.0)
Justification:	[Default]	Default Value
Hydraulic Conductivity		LOGUNIFORM(1.00E-09, 1.00E-05)
Justification:	[Default]	Default Value

Engineered Controls

Cap		Single Liner
Cap Thickness		SINGLE(1.00E-03)
Cap Hydraulic Conductivity		SINGLE(1.00E-11)
Justifications		
Cap	[Changed]	Site design
Cap Thickness	[Changed]	Site design
Cap Hydraulic Conductivity	[Changed]	Site design
liner		Composite
First Layer:		
Liner Thickness		UNIFORM(0.45, 0.55)
Liner Hydraulic Conductivity		SINGLE(5.00E-10)
Second Layer:		
Liner 2 Thickness		SINGLE(0.002)
Liner 2 Hydraulic Conductivity		SINGLE(1.00E-12)
Justifications		
Liner	[Changed]	Site design
Liner Thickness	[Changed]	Site design
Liner Hydraulic Conductivity	[Changed]	Site design
Justification:	[Changed]	Default
Methane Oxidation %		SINGLE(10.0)
Justification:	[Default]	Default Value
Land Raise Depth		SINGLE(16.0)

Geosphere

Ground Surface (mAOD)		106
Water Table (mAOD)		88
Geosphere Moisture Content		UNIFORM(5.0, 20.0)
Geosphere Porosity		UNIFORM(24.0, 53.0)

Cell 6a

Infiltration		SINGLE(900.0)
Justification:	[Changed]	Met Office

Waste Input

Year	AmountDeposited (t)
2021	TRIANGULAR(1.92E+04, 2.13E+04, 2.34E+04)
2022	TRIANGULAR(1.24E+05, 1.38E+05, 1.51E+05)
Justification:	[Changed] Cell Volume

Waste Breakdown

2021	
Domestic	UNIFORM(15.0, 20.0)
Civic Amenity	UNIFORM(5.0, 10.0)
Commercial	UNIFORM(15.0, 20.0)
Industrial	UNIFORM(35.0, 45.0)
Inert	UNIFORM(15.0, 20.0)
User Defined 1	SINGLE(100.0)

2022	
Domestic	UNIFORM(15.0, 20.0)
Civic Amenity	UNIFORM(5.0, 10.0)
Commercial	UNIFORM(15.0, 20.0)
Industrial	UNIFORM(35.0, 45.0)
Inert	UNIFORM(15.0, 20.0)
User Defined 1	SINGLE(100.0)
Justification:	[Default] Client data

Trace Gases

<i>Source Gases</i>	Concentration [mg/m3]
1,1,1,2-Tetrafluorochloroethane	LOGTRIANGULAR(0.002, 0.2, 2.0)
1,1,1-Trichlorotrifluoroethane	LOGTRIANGULAR(0.005, 0.4, 8.0)
1,1,2-Trichloroethane	LOGTRIANGULAR(0.004, 1.0, 10.0)
1,1-Dichloroethane	LOGTRIANGULAR(0.02, 0.28, 3.9)
1,1-Dichloroethene	LOGTRIANGULAR(0.03, 2.8, 19.0)
1,1-Dichlorotetrafluoroethane	LOGTRIANGULAR(0.05, 0.25, 6.4)
1,2-Dichloropropane	SINGLE(0.0)
1,2-Dichlorotetrafluoroethane	LOGTRIANGULAR(0.01, 9.8, 300.0)
1-butanethiol	LOGUNIFORM(1.00E-30, 8.00E-02)
1-Chloro-1,1-difluoroethane	LOGTRIANGULAR(0.04, 0.57, 31.0)
2-butoxy ethanol	LOGUNIFORM(1.00E-30, 5.00E-02)
2-Chloro-1,1,1-trifluoroethane	LOGUNIFORM(0.05, 1.5)
2-Propanol	LOGTRIANGULAR(0.005, 2.0, 34.0)
Acetaldehyde (ethanal)	LOGUNIFORM(0.075, 2.546)
Acetone	LOGTRIANGULAR(0.005, 0.1, 50.0)
Acrylonitrile	LOGTRIANGULAR(0.02, 0.4, 38.0)
Benzene	LOGTRIANGULAR(3.1, 15.0, 73.0)
Bromodichloromethane	SINGLE(0.0)
Butadiene (modelled as 1,3-Butadiene)	LOGUNIFORM(1.00E-30, 2.00E-02)
Butane	LOGTRIANGULAR(0.19, 1.0, 709.0)
Butene isomers	LOGTRIANGULAR(1.00E-03, 2.00E-01, 1.80E+00)
Butyric acid	LOGTRIANGULAR(1.00E-30, 1.00E-01, 1.75E+01)
Carbon disulphide	LOGUNIFORM(0.9, 170.0)
Carbon monoxide	LOGTRIANGULAR(0.11, 1.1, 5000.0)
Carbon tetrachloride (tetrachloromethane)	LOGUNIFORM(1.00E-30, 2.00E-02)
Carbonyl sulphide	LOGTRIANGULAR(0.006, 0.2, 4.4)
Chlorobenzene	LOGUNIFORM(0.002, 3000.0)
Chlorodifluoromethane	LOGTRIANGULAR(0.005, 0.1, 9900.0)
Chloroethane	LOGUNIFORM(1.00E-30, 5.30E+00)
Chlorofluorocarbons (CFCs) (Total)	LOGTRIANGULAR(0.06, 102.3, 1230.0)
Chlorofluoromethane	LOGTRIANGULAR(0.008, 0.2, 110.0)
Chloroform (trichloromethane)	LOGTRIANGULAR(1.00E-03, 2.00E-01, 7.00E+01)
Chlorotrifluoromethane	LOGTRIANGULAR(0.1, 0.2, 49.0)
Dichlorodifluoromethane	LOGTRIANGULAR(0.01, 9.0, 790.0)
Dichlorofluoromethane	LOGTRIANGULAR(1.00E-03, 1.00E-02, 6.02E+02)
Dichloromethane (methylene chloride)	LOGTRIANGULAR(1.00E-03, 2.00E-02, 1.52E+03)
Diethyl disulphide	LOGTRIANGULAR(1.00E-03, 2.00E-02, 2.60E+00)
Dimethyl disulphide	LOGTRIANGULAR(0.03, 0.17, 12.0)
Dimethyl sulphide	LOGTRIANGULAR(0.03, 0.73, 24.3)
Ethane	LOGTRIANGULAR(0.005, 6.25, 200.0)
Ethanethiol (ethyl mercaptan)	LOGUNIFORM(1.00E-30, 8.00E-02)
Ethanol	LOGTRIANGULAR(0.005, 0.2, 810.0)
Ethyl butyrate	LOGUNIFORM(0.41, 42.0)
Ethyl toluene (all isomers)	LOGTRIANGULAR(1.00E-03, 1.00E-02, 8.30E+00)
Ethylbenzene	LOGTRIANGULAR(1.00E-03, 1.00E-03, 8.75E+02)
Ethylene	UNIFORM(0.2, 5.8)
Ethylene dibromide	SINGLE(0.0)
Ethylene dichloride	LOGTRIANGULAR(0.006, 0.01, 1820.0)
Fluorotrichloromethane	LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.00E+03)
Formaldehyde (methanal)	LOGTRIANGULAR(0.026, 0.068, 0.188)
Freon 113	LOGTRIANGULAR(0.013, 4.8, 125.0)
Furan	LOGTRIANGULAR(0.02, 0.82, 6.2)
Halons	SINGLE(0.0)
Hexachlorocyclohexane (all isomers)	SINGLE(0.0)
Hexane	LOGTRIANGULAR(1.00E-03, 9.60E+00, 4.40E+01)
Hydrochlorofluorocarbons (HCFCs) (Total)	LOGTRIANGULAR(0.02, 128.8, 916.2)
Hydrofluorocarbons (HFCs) (Total)	SINGLE(0.0)
Hydrogen sulphide	LOGTRIANGULAR(10.0, 200.0, 750.0)
Limonene	LOGTRIANGULAR(1.00E-03, 1.00E-01, 2.40E+02)
Mercury	LOGUNIFORM(1.70E-04, 1.33E-03)
Methanethiol (methyl mercaptan)	LOGUNIFORM(1.00E-30, 3.00E-01)
Methyl chloride (chloromethane)	LOGTRIANGULAR(0.006, 0.2, 10.0)
Methyl chloroform (1,1,1-Trichloroethane)	LOGTRIANGULAR(1.00E-03, 1.80E+02, 1.60E+03)
Methyl ethyl ketone (2-butanone)	LOGTRIANGULAR(0.005, 0.005, 73.0)

Methyl isobutyl ketone		LOGTRIANGULAR(0.005, 0.2, 9.9)
Nitric acid		SINGLE(0.0)
Odour Units (Predicted)		TRIANGULAR(5.00E+04, 1.25E+05, 2.50E+05)
PAH (reported as Naphthalene)		LOGTRIANGULAR(1.00E-03, 2.00E-01, 1.70E+01)
para-Dichlorobenzene (modelled as 1,4-Dichlorobenzene)		LOGTRIANGULAR(0.006, 0.05, 2.7)
Pentane		LOGTRIANGULAR(0.02, 0.3, 105.0)
Pentene (all isomers)		LOGTRIANGULAR(0.24, 3.5, 12.0)
Perfluorocarbons (PFCs) (Total)		SINGLE(0.0)
Phenol		SINGLE(0.0)
PM10s		SINGLE(0.0)
Propane		LOGTRIANGULAR(1.00E-03, 1.90E+00, 1.29E+01)
Propanethiol		LOGUNIFORM(1.00E-30, 9.00E-02)
Sulphide, total simulations with H2S		LOGTRIANGULAR(1.00E-03, 2.40E+00, 5.58E+03)
Sulphide, total simulations without H2S		LOGTRIANGULAR(5.00E-04, 8.00E-03, 3.50E+00)
t-1,2-Dichloroethene		LOGTRIANGULAR(0.02, 0.24, 2.6)
Tetrachloroethane (modelled as 1,1,2,2-Tetrachloroethane)		LOGUNIFORM(1.00E-03, 5.00E+01)
Tetrachloroethylene (Tetrachloroethene)		LOGTRIANGULAR(1.00E-03, 1.00E-02, 7.70E+03)
Toluene		LOGTRIANGULAR(0.01, 0.1, 1250.0)
Trichlorobenzene (all isomers)		LOGTRIANGULAR(0.01, 0.01, 0.13)
Trichloroethylene (trichloroethene)		LOGTRIANGULAR(0.25, 1.65, 88.0)
Trichlorofluoromethane		LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.00E+03)
Trichlorotrifluoroethane		LOGTRIANGULAR(1.00E-03, 4.80E+00, 2.40E+01)
Trimethylbenzene (all isomers)		LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.87E+02)
Vinyl chloride (chloroethene, chloroethyle		LOGTRIANGULAR(1.1, 31.0, 730.0)
Xylene (all isomers)		LOGTRIANGULAR(1.00E-03, 1.00E-03, 6.18E+04)
Justification:	[Default]	Default Value
VOC Half-life		NORMAL(4.11, 1.56)
Justification:	[Default]	Default Value

Waste Moisture Content

Degradation rate - Filling Phase		Wet
Justification:	[Changed]	NRW Decision doc
Degradation rate - after change		Average
Justification:	[Default]	Default Value
Waste Density		UNIFORM(0.8, 1.2)
Justification:	[Default]	Default Value
Leachate Head		SINGLE(1.0)
Justification:	[Default]	Default Value
Hydraulic Conductivity		LOGUNIFORM(1.00E-09, 1.00E-05)
Justification:	[Default]	Default Value

Engineered Controls

Cap		Single Liner
Cap Thickness		SINGLE(1.00E-03)
Cap Hydraulic Conductivity		SINGLE(1.00E-11)
Justifications		
Cap	[Changed]	Site design
Cap Thickness	[Changed]	Site design
Cap Hydraulic Conductivity	[Changed]	Site design
liner		Composite
First Layer:		
Liner Thickness		UNIFORM(0.45, 0.55)
Liner Hydraulic Conductivity		SINGLE(5.00E-10)
Second Layer:		
Liner 2 Thickness		SINGLE(0.002)
Liner 2 Hydraulic Conductivity		SINGLE(1.00E-12)
Justifications		
Liner	[Changed]	Site design
Liner Thickness	[Changed]	Site design
Liner Hydraulic Conductivity	[Changed]	Site design
Justification:	[Changed]	Default
Methane Oxidation %		SINGLE(10.0)
Justification:	[Default]	Default Value
Land Raise Depth		SINGLE(16.0)

Geosphere

Ground Surface (mAOD)		106
Water Table (mAOD)		88
Geosphere Moisture Content		UNIFORM(5.0, 20.0)
Geosphere Porosity		UNIFORM(24.0, 53.0)

Cell 6b

Infiltration		SINGLE(900.0)
Justification:	[Changed]	Met Office

Waste Input

Year		AmountDeposited (t)
2022		TRIANGULAR(4.80E+04, 5.33E+04, 5.86E+04)
2023		TRIANGULAR(9.50E+04, 1.06E+05, 1.16E+05)
Justification:	[Changed]	Cell Volume

Waste Breakdown

2022		
Domestic		UNIFORM(15.0, 20.0)
Civic Amenity		UNIFORM(5.0, 10.0)
Commercial		UNIFORM(15.0, 20.0)
Industrial		UNIFORM(35.0, 45.0)
Inert		UNIFORM(15.0, 20.0)
2023		

Domestic	UNIFORM(15.0, 20.0)
Civic Amenity	UNIFORM(5.0, 10.0)
Commercial	UNIFORM(15.0, 20.0)
Industrial	UNIFORM(35.0, 45.0)
Inert	UNIFORM(15.0, 20.0)
Justification:	[Default] Client data
Trace Gases	
<i>Source Gases</i>	Concentration [mg/m3]
1,1,1,2-Tetrafluorochloroethane	LOGTRIANGULAR(0.002, 0.2, 2.0)
1,1,1-Trichlorotrifluoroethane	LOGTRIANGULAR(0.005, 0.4, 8.0)
1,1,2-Trichloroethane	LOGTRIANGULAR(0.004, 1.0, 10.0)
1,1-Dichloroethane	LOGTRIANGULAR(0.02, 0.28, 3.9)
1,1-Dichloroethene	LOGTRIANGULAR(0.03, 2.8, 19.0)
1,1-Dichlorotetrafluoroethane	LOGTRIANGULAR(0.05, 0.25, 6.4)
1,2-Dichloropropane	SINGLE(0.0)
1,2-Dichlorotetrafluoroethane	LOGTRIANGULAR(0.01, 9.8, 300.0)
1-butanethiol	LOGUNIFORM(1.00E-30, 8.00E-02)
1-Chloro-1,1-difluoroethane	LOGTRIANGULAR(0.04, 0.57, 31.0)
2-butoxy ethanol	LOGUNIFORM(1.00E-30, 5.00E-02)
2-Chloro-1,1,1-trifluoroethane	LOGUNIFORM(0.05, 1.5)
2-Propanol	LOGTRIANGULAR(0.005, 2.0, 34.0)
Acetaldehyde (ethanal)	LOGUNIFORM(0.075, 2.546)
Acetone	LOGTRIANGULAR(0.005, 0.1, 50.0)
Acrylonitrile	LOGTRIANGULAR(0.02, 0.4, 38.0)
Benzene	LOGTRIANGULAR(3.1, 15.0, 73.0)
Bromodichloromethane	SINGLE(0.0)
Butadiene (modelled as 1,3-Butadiene)	LOGUNIFORM(1.00E-30, 2.00E-02)
Butane	LOGTRIANGULAR(0.19, 1.0, 709.0)
Butene isomers	LOGTRIANGULAR(1.00E-03, 2.00E-01, 1.80E+00)
Butyric acid	LOGTRIANGULAR(1.00E-30, 1.00E-01, 1.75E+01)
Carbon disulphide	LOGUNIFORM(0.9, 170.0)
Carbon monoxide	LOGTRIANGULAR(0.11, 1.1, 5000.0)
Carbon tetrachloride (tetrachloromethane)	LOGUNIFORM(1.00E-30, 2.00E-02)
Carbonyl sulphide	LOGTRIANGULAR(0.006, 0.2, 4.4)
Chlorobenzene	LOGUNIFORM(0.002, 3000.0)
Chlorodifluoromethane	LOGTRIANGULAR(0.005, 0.1, 9900.0)
Chloroethane	LOGUNIFORM(1.00E-30, 5.30E+00)
Chlorofluorocarbons (CFCs) (Total)	LOGTRIANGULAR(0.06, 102.3, 1230.0)
Chlorofluoromethane	LOGTRIANGULAR(0.008, 0.2, 110.0)
Chloroform (trichloromethane)	LOGTRIANGULAR(1.00E-03, 2.00E-01, 7.00E+01)
Chlorotrifluoromethane	LOGTRIANGULAR(0.1, 0.2, 49.0)
Dichlorodifluoromethane	LOGTRIANGULAR(0.01, 9.0, 790.0)
Dichlorofluoromethane	LOGTRIANGULAR(1.00E-03, 1.00E-02, 6.02E+02)
Dichloromethane (methylene chloride)	LOGTRIANGULAR(1.00E-03, 2.00E-02, 1.52E+03)
Diethyl disulphide	LOGTRIANGULAR(1.00E-03, 2.00E-02, 2.60E+00)
Dimethyl disulphide	LOGTRIANGULAR(0.03, 0.17, 12.0)
Dimethyl sulphide	LOGTRIANGULAR(0.03, 0.73, 24.3)
Ethane	LOGTRIANGULAR(0.005, 6.25, 200.0)
Ethanethiol (ethyl mercaptan)	LOGUNIFORM(1.00E-30, 8.00E-02)
Ethanol	LOGTRIANGULAR(0.005, 0.2, 810.0)
Ethyl butyrate	LOGUNIFORM(0.41, 42.0)
Ethyl toluene (all isomers)	LOGTRIANGULAR(1.00E-03, 1.00E-02, 8.30E+00)
Ethylbenzene	LOGTRIANGULAR(1.00E-03, 1.00E-03, 8.75E+02)
Ethylene	UNIFORM(0.2, 5.8)
Ethylene dibromide	SINGLE(0.0)
Ethylene dichloride	LOGTRIANGULAR(0.006, 0.01, 1820.0)
Fluorotrichloromethane	LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.00E+03)
Formaldehyde (methanal)	LOGTRIANGULAR(0.026, 0.068, 0.188)
Freon 113	LOGTRIANGULAR(0.013, 4.8, 125.0)
Furan	LOGTRIANGULAR(0.02, 0.82, 6.2)
Halons	SINGLE(0.0)
Hexachlorocyclohexane (all isomers)	SINGLE(0.0)
Hexane	LOGTRIANGULAR(1.00E-03, 9.60E+00, 4.40E+01)
Hydrochlorofluorocarbons (HCFCs) (Total)	LOGTRIANGULAR(0.02, 128.8, 916.2)
Hydrofluorocarbons (HFCs) (Total)	SINGLE(0.0)
Hydrogen sulphide	LOGTRIANGULAR(10.0, 200.0, 750.0)
Limonene	LOGTRIANGULAR(1.00E-03, 1.00E-01, 2.40E+02)
Mercury	LOGUNIFORM(1.70E-04, 1.33E-03)
Methanethiol (methyl mercaptan)	LOGUNIFORM(1.00E-30, 3.00E-01)
Methyl chloride (chloromethane)	LOGTRIANGULAR(0.006, 0.2, 10.0)
Methyl chloroform (1,1,1-Trichloroethane)	LOGTRIANGULAR(1.00E-03, 1.80E+02, 1.60E+03)
Methyl ethyl ketone (2-butanone)	LOGTRIANGULAR(0.005, 0.005, 73.0)
Methyl isobutyl ketone	LOGTRIANGULAR(0.005, 0.2, 9.9)
Nitric acid	SINGLE(0.0)
Odour Units (Predicted)	TRIANGULAR(5.00E+04, 1.25E+05, 2.50E+05)
PAH (reported as Naphthalene)	LOGTRIANGULAR(1.00E-03, 2.00E-01, 1.70E+01)
para-Dichlorobenzene (modelled as 1,4-Dichlorobenzene)	LOGTRIANGULAR(0.006, 0.05, 2.7)
Pentane	LOGTRIANGULAR(0.02, 0.3, 105.0)
Pentene (all isomers)	LOGTRIANGULAR(0.24, 3.5, 12.0)
Perfluorocarbons (PFCs) (Total)	SINGLE(0.0)
Phenol	SINGLE(0.0)
PM10s	SINGLE(0.0)
Propane	LOGTRIANGULAR(1.00E-03, 1.90E+00, 1.29E+01)
Propanethiol	LOGUNIFORM(1.00E-30, 9.00E-02)
Sulphide, total simulations with H2S	LOGTRIANGULAR(1.00E-03, 2.40E+00, 5.58E+03)
Sulphide, total simulations without H2S	LOGTRIANGULAR(5.00E-04, 8.00E-03, 3.50E+00)

t-1,2-Dichloroethene		LOGTRIANGULAR(0.02, 0.24, 2.6)
Tetrachloroethane (modelled as 1,1,2,2-Tetrachloroethane)		LOGUNIFORM(1.00E-03, 5.00E+01)
Tetrachloroethylene (Tetrachloroethene)		LOGTRIANGULAR(1.00E-03, 1.00E-02, 7.70E+03)
Toluene		LOGTRIANGULAR(0.01, 0.1, 1250.0)
Trichlorobenzene (all isomers)		LOGTRIANGULAR(0.01, 0.01, 0.13)
Trichloroethylene (trichloroethene)		LOGTRIANGULAR(0.25, 1.65, 88.0)
Trichlorofluoromethane		LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.00E+03)
Trichlorotrifluoroethane		LOGTRIANGULAR(1.00E-03, 4.80E+00, 2.40E+01)
Trimethylbenzene (all isomers)		LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.87E+02)
Vinyl chloride (chloroethene, chloroethylene)		LOGTRIANGULAR(1.1, 31.0, 730.0)
Xylene (all isomers)		LOGTRIANGULAR(1.00E-03, 1.00E-03, 6.18E+04)
Justification:	[Default]	Default Value
VOC Half-life		NORMAL(4.11, 1.56)
Justification:	[Default]	Default Value

Waste Moisture Content

Degradation rate - Filling Phase		Wet
Justification:	[Changed]	NRW Decision doc
Degradation rate - after change		Average
Justification:	[Default]	Default Value
Waste Density		UNIFORM(0.8, 1.2)
Justification:	[Default]	Default Value
Leachate Head		SINGLE(1.0)
Justification:	[Default]	Default Value
Hydraulic Conductivity		LOGUNIFORM(1.00E-09, 1.00E-05)
Justification:	[Default]	Default Value

Engineered Controls

Cap		Single Liner
Cap Thickness		SINGLE(1.00E-03)
Cap Hydraulic Conductivity		SINGLE(1.00E-11)
Justifications		
Cap	[Changed]	Site design
Cap Thickness	[Changed]	Site design
Cap Hydraulic Conductivity	[Changed]	Site design
liner		Composite
First Layer:		
Liner Thickness		UNIFORM(0.45, 0.55)
Liner Hydraulic Conductivity		SINGLE(5.00E-10)
Second Layer:		
Liner 2 Thickness		SINGLE(0.002)
Liner 2 Hydraulic Conductivity		SINGLE(1.00E-12)
Justifications		
Liner	[Changed]	Site design
Liner Thickness	[Changed]	Site design
Liner Hydraulic Conductivity	[Changed]	Site design
Justification:	[Changed]	Default
Methane Oxidation %		SINGLE(10.0)
Justification:	[Default]	Default Value
Land Raise Depth		SINGLE(16.0)

Geosphere

Ground Surface (mAOD)		106
Water Table (mAOD)		88
Geosphere Moisture Content		UNIFORM(5.0, 20.0)
Geosphere Porosity		UNIFORM(24.0, 53.0)

Cell 7a

Infiltration		SINGLE(900.0)
Justification:	[Changed]	Met Office

Waste Input

Year		Amount Deposited (t)
2023		TRIANGULAR(6.23E+04, 6.92E+04, 7.61E+04)
2024		TRIANGULAR(1.40E+05, 1.55E+05, 1.71E+05)
Justification:	[Changed]	Cell Volume

Waste Breakdown

2023		
Inert		UNIFORM(15.0, 20.0)
User Defined 1		UNIFORM(80.0, 85.0)
2024		
Inert		UNIFORM(15.0, 20.0)
User Defined 1		UNIFORM(80.0, 85.0)
Justification:	[Default]	Client data

Trace Gases

Source Gases		Concentration [mg/m3]
1,1,1,2-Tetrafluorochloroethane		LOGTRIANGULAR(0.002, 0.2, 2.0)
1,1,1-Trichlorotrifluoroethane		LOGTRIANGULAR(0.005, 0.4, 8.0)
1,1,2-Trichloroethane		LOGTRIANGULAR(0.004, 1.0, 10.0)
1,1-Dichloroethane		LOGTRIANGULAR(0.02, 0.28, 3.9)
1,1-Dichloroethene		LOGTRIANGULAR(0.03, 2.8, 19.0)
1,1-Dichlorotetrafluoroethane		LOGTRIANGULAR(0.05, 0.25, 6.4)
1,2-Dichloropropane		SINGLE(0.0)
1,2-Dichlorotetrafluoroethane		LOGTRIANGULAR(0.01, 9.8, 300.0)
1-butanethiol		LOGUNIFORM(1.00E-30, 8.00E-02)
1-Chloro-1,1-difluoroethane		LOGTRIANGULAR(0.04, 0.57, 31.0)
2-butoxy ethanol		LOGUNIFORM(1.00E-30, 5.00E-02)
2-Chloro-1,1,1-trifluoroethane		LOGUNIFORM(0.05, 1.5)
2-Propanol		LOGTRIANGULAR(0.005, 2.0, 34.0)

Acetaldehyde (ethanal)	LOGUNIFORM(0.075, 2.546)
Acetone	LOGTRIANGULAR(0.005, 0.1, 50.0)
Acrylonitrile	LOGTRIANGULAR(0.02, 0.4, 38.0)
Benzene	LOGTRIANGULAR(3.1, 15.0, 73.0)
Bromodichloromethane	SINGLE(0.0)
Butadiene (modelled as 1,3-Butadiene)	LOGUNIFORM(1.00E-30, 2.00E-02)
Butane	LOGTRIANGULAR(0.19, 1.0, 709.0)
Butene isomers	LOGTRIANGULAR(1.00E-03, 2.00E-01, 1.80E+00)
Butyric acid	LOGTRIANGULAR(1.00E-30, 1.00E-01, 1.75E+01)
Carbon disulphide	LOGUNIFORM(0.9, 170.0)
Carbon monoxide	LOGTRIANGULAR(0.11, 1.1, 5000.0)
Carbon tetrachloride (tetrachloromethane)	LOGUNIFORM(1.00E-30, 2.00E-02)
Carbonyl sulphide	LOGTRIANGULAR(0.006, 0.2, 4.4)
Chlorobenzene	LOGUNIFORM(0.002, 3000.0)
Chlorodifluoromethane	LOGTRIANGULAR(0.005, 0.1, 9900.0)
Chloroethane	LOGUNIFORM(1.00E-30, 5.30E+00)
Chlorofluorocarbons (CFCs) (Total)	LOGTRIANGULAR(0.06, 102.3, 1230.0)
Chlorofluoromethane	LOGTRIANGULAR(0.008, 0.2, 110.0)
Chloroform (trichloromethane)	LOGTRIANGULAR(1.00E-03, 2.00E-01, 7.00E+01)
Chlorotrifluoromethane	LOGTRIANGULAR(0.1, 0.2, 49.0)
Dichlorodifluoromethane	LOGTRIANGULAR(0.01, 9.0, 790.0)
Dichlorofluoromethane	LOGTRIANGULAR(1.00E-03, 1.00E-02, 6.02E+02)
Dichloromethane (methylene chloride)	LOGTRIANGULAR(1.00E-03, 2.00E-02, 1.52E+03)
Diethyl disulphide	LOGTRIANGULAR(1.00E-03, 2.00E-02, 2.60E+00)
Dimethyl disulphide	LOGTRIANGULAR(0.03, 0.17, 12.0)
Dimethyl sulphide	LOGTRIANGULAR(0.03, 0.73, 24.3)
Ethane	LOGTRIANGULAR(0.005, 6.25, 200.0)
Ethanethiol (ethyl mercaptan)	LOGUNIFORM(1.00E-30, 8.00E-02)
Ethanol	LOGTRIANGULAR(0.005, 0.2, 810.0)
Ethyl butyrate	LOGUNIFORM(0.41, 42.0)
Ethyl toluene (all isomers)	LOGTRIANGULAR(1.00E-03, 1.00E-02, 8.30E+00)
Ethylbenzene	LOGTRIANGULAR(1.00E-03, 1.00E-03, 8.75E+02)
Ethylene	UNIFORM(0.2, 5.8)
Ethylene dibromide	SINGLE(0.0)
Ethylene dichloride	LOGTRIANGULAR(0.006, 0.01, 1820.0)
Fluorotrichloromethane	LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.00E+03)
Formaldehyde (methanal)	LOGTRIANGULAR(0.026, 0.068, 0.188)
Freon 113	LOGTRIANGULAR(0.013, 4.8, 125.0)
Furan	LOGTRIANGULAR(0.02, 0.82, 6.2)
Halons	SINGLE(0.0)
Hexachlorocyclohexane (all isomers)	SINGLE(0.0)
Hexane	LOGTRIANGULAR(1.00E-03, 9.60E+00, 4.40E+01)
Hydrochlorofluorocarbons (HCFCs) (Total)	LOGTRIANGULAR(0.02, 128.8, 916.2)
Hydrofluorocarbons (HFCs) (Total)	SINGLE(0.0)
Hydrogen sulphide	LOGTRIANGULAR(10.0, 200.0, 750.0)
Limonene	LOGTRIANGULAR(1.00E-03, 1.00E-01, 2.40E+02)
Mercury	LOGUNIFORM(1.70E-04, 1.33E-03)
Methanethiol (methyl mercaptan)	LOGUNIFORM(1.00E-30, 3.00E-01)
Methyl chloride (chloromethane)	LOGTRIANGULAR(0.006, 0.2, 10.0)
Methyl chloroform (1,1,1-Trichloroethane)	LOGTRIANGULAR(1.00E-03, 1.80E+02, 1.60E+03)
Methyl ethyl ketone (2-butanone)	LOGTRIANGULAR(0.005, 0.005, 73.0)
Methyl isobutyl ketone	LOGTRIANGULAR(0.005, 0.2, 9.9)
Nitric acid	SINGLE(0.0)
Odour Units (Predicted)	TRIANGULAR(5.00E+04, 1.25E+05, 2.50E+05)
PAH (reported as Naphthalene)	LOGTRIANGULAR(1.00E-03, 2.00E-01, 1.70E+01)
para-Dichlorobenzene (modelled as 1,4-Dichlorobenzene)	LOGTRIANGULAR(0.006, 0.05, 2.7)
Pentane	LOGTRIANGULAR(0.02, 0.3, 105.0)
Pentene (all isomers)	LOGTRIANGULAR(0.24, 3.5, 12.0)
Perfluorocarbons (PFCs) (Total)	SINGLE(0.0)
Phenol	SINGLE(0.0)
PM10s	SINGLE(0.0)
Propane	LOGTRIANGULAR(1.00E-03, 1.90E+00, 1.29E+01)
Propanethiol	LOGUNIFORM(1.00E-30, 9.00E-02)
Sulphide, total simulations with H2S	LOGTRIANGULAR(1.00E-03, 2.40E+00, 5.58E+03)
Sulphide, total simulations without H2S	LOGTRIANGULAR(5.00E-04, 8.00E-03, 3.50E+00)
t-1,2-Dichloroethene	LOGTRIANGULAR(0.02, 0.24, 2.6)
Tetrachloroethane (modelled as 1,1,2,2-Tetrachloroethane)	LOGUNIFORM(1.00E-03, 5.00E+01)
Tetrachloroethylene (Tetrachloroethene)	LOGTRIANGULAR(1.00E-03, 1.00E-02, 7.70E+03)
Toluene	LOGTRIANGULAR(0.01, 0.1, 1250.0)
Trichlorobenzene (all isomers)	LOGTRIANGULAR(0.01, 0.01, 0.13)
Trichloroethylene (trichloroethene)	LOGTRIANGULAR(0.25, 1.65, 88.0)
Trichlorofluoromethane	LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.00E+03)
Trichlorotrifluoroethane	LOGTRIANGULAR(1.00E-03, 4.80E+00, 2.40E+01)
Trimethylbenzene (all isomers)	LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.87E+02)
Vinyl chloride (chloroethene, chloroethyle)	LOGTRIANGULAR(1.1, 31.0, 730.0)
Xylene (all isomers)	LOGTRIANGULAR(1.00E-03, 1.00E-03, 6.18E+04)
Justification:	[Default] Default Value
VOC Halflife	NORMAL(4.11, 1.56)
Justification:	[Default] Default Value
Waste Moisture Content	
Degradation rate - Filling Phase	Wet
Justification:	[Changed] NRW Decision doc
Degradation rate - after change	Average
Justification:	[Default] Default Value
Waste Density	UNIFORM(0.8, 1.2)

Justification:	[Default]	Default Value
Leachate Head		SINGLE(1.0)
Justification:	[Default]	Default Value
Hydraulic Conductivity		LOGUNIFORM(1.00E-09, 1.00E-05)
Justification:	[Default]	Default Value
Engineered Controls		
Cap		Single Liner
Cap Thickness		SINGLE(1.00E-03)
Cap Hydraulic Conductivity		SINGLE(1.00E-11)
Justifications		
Cap	[Changed]	Site design
Cap Thickness	[Changed]	Site design
Cap Hydraulic Conductivit	[Changed]	Site design
liner		Composite
First Layer:		
Liner Thickness		UNIFORM(0.45, 0.55)
Liner Hydraulic Conductivity		SINGLE(5.00E-10)
Second Layer:		
Liner 2 Thickness		SINGLE(0.002)
Liner 2 Hydraulic Conductivity		SINGLE(1.00E-12)
Justifications		
Liner	[Changed]	Site design
Liner Thickness	[Changed]	Site design
Liner Hydraulic Conductivi	[Changed]	Site design
Justification:	[Changed]	Default
Methane Oxidation %		SINGLE(10.0)
Justification:	[Default]	Default Value
Land Raise Depth		SINGLE(16.0)
Geosphere		
Ground Surface (mAOD)		106
Water Table (mAOD)		88
Geosphere Moisture Content		UNIFORM(5.0, 20.0)
Geosphere Porosity		UNIFORM(24.0, 53.0)
Cell 7b		
Infiltration		SINGLE(900.0)
Justification:	[Changed]	Met Office
Waste Input		
Year		AmountDeposited (t)
2024		TRIANGULAR(1.48E+05, 1.65E+05, 1.81E+05)
2025		TRIANGULAR(5.41E+04, 6.01E+04, 6.61E+04)
Justification:	[Changed]	Cell Volume
Waste Breakdown		
2024		
Inert		UNIFORM(15.0, 20.0)
User Defined 1		UNIFORM(80.0, 85.0)
2025		
Inert		UNIFORM(15.0, 20.0)
User Defined 1		UNIFORM(80.0, 85.0)
Justification:	[Default]	Client data
Trace Gases		
Source Gases		Concentration [mg/m3]
1,1,1,2-Tetrafluorochloroethane		LOGTRIANGULAR(0.002, 0.2, 2.0)
1,1,1-Trichlorotrifluoroethane		LOGTRIANGULAR(0.005, 0.4, 8.0)
1,1,2-Trichloroethane		LOGTRIANGULAR(0.004, 1.0, 10.0)
1,1-Dichloroethane		LOGTRIANGULAR(0.02, 0.28, 3.9)
1,1-Dichloroethene		LOGTRIANGULAR(0.03, 2.8, 19.0)
1,1-Dichlorotetrafluoroethane		LOGTRIANGULAR(0.05, 0.25, 6.4)
1,2-Dichloropropane		SINGLE(0.0)
1,2-Dichlorotetrafluoroethane		LOGTRIANGULAR(0.01, 9.8, 300.0)
1-butanethiol		LOGUNIFORM(1.00E-30, 8.00E-02)
1-Chloro-1,1-difluoroethane		LOGTRIANGULAR(0.04, 0.57, 31.0)
2-butoxy ethanol		LOGUNIFORM(1.00E-30, 5.00E-02)
2-Chloro-1,1,1-trifluoroethane		LOGUNIFORM(0.05, 1.5)
2-Propanol		LOGTRIANGULAR(0.005, 2.0, 34.0)
Acetalehyde (ethanal)		LOGUNIFORM(0.075, 2.546)
Acetone		LOGTRIANGULAR(0.005, 0.1, 50.0)
Acrylonitrile		LOGTRIANGULAR(0.02, 0.4, 38.0)
Benzene		LOGTRIANGULAR(3.1, 15.0, 73.0)
Bromodichloromethane		SINGLE(0.0)
Butadiene (modelled as 1,3-Butadiene)		LOGUNIFORM(1.00E-30, 2.00E-02)
Butane		LOGTRIANGULAR(0.19, 1.0, 709.0)
Butene isomers		LOGTRIANGULAR(1.00E-03, 2.00E-01, 1.80E+00)
Butyric acid		LOGTRIANGULAR(1.00E-30, 1.00E-01, 1.75E+01)
Carbon disulphide		LOGUNIFORM(0.9, 170.0)
Carbon monoxide		LOGTRIANGULAR(0.11, 1.1, 5000.0)
Carbon tetrachloride (tetrachloromethane)		LOGUNIFORM(1.00E-30, 2.00E-02)
Carbonyl sulphide		LOGTRIANGULAR(0.006, 0.2, 4.4)
Chlorobenzene		LOGUNIFORM(0.002, 3000.0)
Chlorodifluoromethane		LOGTRIANGULAR(0.005, 0.1, 9900.0)
Chloroethane		LOGUNIFORM(1.00E-30, 5.30E+00)
Chlorofluorocarbons (CFCs) (Total)		LOGTRIANGULAR(0.06, 102.3, 1230.0)
Chlorofluoromethane		LOGTRIANGULAR(0.008, 0.2, 110.0)
Chloroform (trichloromethane)		LOGTRIANGULAR(1.00E-03, 2.00E-01, 7.00E+01)
Chlorotrifluoromethane		LOGTRIANGULAR(0.1, 0.2, 49.0)
Dichlorodifluoromethane		LOGTRIANGULAR(0.01, 9.0, 790.0)

Dichlorofluoromethane	LOGTRIANGULAR(1.00E-03, 1.00E-02, 6.02E+02)
Dichloromethane (methylene chloride)	LOGTRIANGULAR(1.00E-03, 2.00E-02, 1.52E+03)
Diethyl disulphide	LOGTRIANGULAR(1.00E-03, 2.00E-02, 2.60E+00)
Dimethyl disulphide	LOGTRIANGULAR(0.03, 0.17, 12.0)
Dimethyl sulphide	LOGTRIANGULAR(0.03, 0.73, 24.3)
Ethane	LOGTRIANGULAR(0.005, 6.25, 200.0)
Ethanethiol (ethyl mercaptan)	LOGUNIFORM(1.00E-30, 8.00E-02)
Ethanol	LOGTRIANGULAR(0.005, 0.2, 810.0)
Ethyl butyrate	LOGUNIFORM(0.41, 42.0)
Ethyl toluene (all isomers)	LOGTRIANGULAR(1.00E-03, 1.00E-02, 8.30E+00)
Ethylbenzene	LOGTRIANGULAR(1.00E-03, 1.00E-03, 8.75E+02)
Ethylene	UNIFORM(0.2, 5.8)
Ethylene dibromide	SINGLE(0.0)
Ethylene dichloride	LOGTRIANGULAR(0.006, 0.01, 1820.0)
Fluorotrichloromethane	LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.00E+03)
Formaldehyde (methanal)	LOGTRIANGULAR(0.026, 0.068, 0.188)
Freon 113	LOGTRIANGULAR(0.013, 4.8, 125.0)
Furan	LOGTRIANGULAR(0.02, 0.82, 6.2)
Halons	SINGLE(0.0)
Hexachlorocyclohexane (all isomers)	SINGLE(0.0)
Hexane	LOGTRIANGULAR(1.00E-03, 9.60E+00, 4.40E+01)
Hydrochlorofluorocarbons (HCFCs) (Total)	LOGTRIANGULAR(0.02, 128.8, 916.2)
Hydrofluorocarbons (HFCs) (Total)	SINGLE(0.0)
Hydrogen sulphide	LOGTRIANGULAR(10.0, 200.0, 750.0)
Limonene	LOGTRIANGULAR(1.00E-03, 1.00E-01, 2.40E+02)
Mercury	LOGUNIFORM(1.70E-04, 1.33E-03)
Methanethiol (methyl mercaptan)	LOGUNIFORM(1.00E-30, 3.00E-01)
Methyl chloride (chloromethane)	LOGTRIANGULAR(0.006, 0.2, 10.0)
Methyl chloroform (1,1,1-Trichloroethane)	LOGTRIANGULAR(1.00E-03, 1.80E+02, 1.60E+03)
Methyl ethyl ketone (2-butanone)	LOGTRIANGULAR(0.005, 0.005, 73.0)
Methyl isobutyl ketone	LOGTRIANGULAR(0.005, 0.2, 9.9)
Nitric acid	SINGLE(0.0)
Odour Units (Predicted)	TRIANGULAR(5.00E+04, 1.25E+05, 2.50E+05)
PAH (reported as Naphthalene)	LOGTRIANGULAR(1.00E-03, 2.00E-01, 1.70E+01)
para-Dichlorobenzene (modelled as 1,4-Dichlorobenzene)	LOGTRIANGULAR(0.006, 0.05, 2.7)
Pentane	LOGTRIANGULAR(0.02, 0.3, 105.0)
Pentene (all isomers)	LOGTRIANGULAR(0.24, 3.5, 12.0)
Perfluorocarbons (PFCs) (Total)	SINGLE(0.0)
Phenol	SINGLE(0.0)
PM10s	SINGLE(0.0)
Propane	LOGTRIANGULAR(1.00E-03, 1.90E+00, 1.29E+01)
Propanethiol	LOGUNIFORM(1.00E-30, 9.00E-02)
Sulphide, total simulations with H2S	LOGTRIANGULAR(1.00E-03, 2.40E+00, 5.58E+03)
Sulphide, total simulations without H2S	LOGTRIANGULAR(5.00E-04, 8.00E-03, 3.50E+00)
t-1,2-Dichloroethene	LOGTRIANGULAR(0.02, 0.24, 2.6)
Tetrachloroethane (modelled as 1,1,2,2-Tetrachloroethane)	LOGUNIFORM(1.00E-03, 5.00E+01)
Tetrachloroethylene (Tetrachloroethene)	LOGTRIANGULAR(1.00E-03, 1.00E-02, 7.70E+03)
Toluene	LOGTRIANGULAR(0.01, 0.1, 1250.0)
Trichlorobenzene (all isomers)	LOGTRIANGULAR(0.01, 0.01, 0.13)
Trichloroethylene (trichloroethene)	LOGTRIANGULAR(0.25, 1.65, 88.0)
Trichlorofluoromethane	LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.00E+03)
Trichlorotrifluoroethane	LOGTRIANGULAR(1.00E-03, 4.80E+00, 2.40E+01)
Trimethylbenzene (all isomers)	LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.87E+02)
Vinyl chloride (chloroethene, chloroethylene)	LOGTRIANGULAR(1.1, 31.0, 730.0)
Xylene (all isomers)	LOGTRIANGULAR(1.00E-03, 1.00E-03, 6.18E+04)
Justification:	[Default] Default Value
VOC Halflife	NORMAL(4.11, 1.56)
Justification:	[Default] Default Value

Waste Moisture Content

Degradation rate - Filling Phase	Wet
Justification:	[Changed] NRW Decision doc
Degradation rate - after change	Average
Justification:	[Default] Default Value
Waste Density	UNIFORM(0.8, 1.2)
Justification:	[Default] Default Value
Leachate Head	SINGLE(1.0)
Justification:	[Default] Default Value
Hydraulic Conductivity	LOGUNIFORM(1.00E-09, 1.00E-05)
Justification:	[Default] Default Value

Engineered Controls

Cap	Single Liner
Cap Thickness	SINGLE(1.00E-03)
Cap Hydraulic Conductivity	SINGLE(1.00E-11)
Justifications	
Cap	[Changed] Site design
Cap Thickness	[Changed] Site design
Cap Hydraulic Conductivity	[Changed] Site design
liner	Composite
First Layer:	
Liner Thickness	UNIFORM(0.45, 0.55)
Liner Hydraulic Conductivity	SINGLE(5.00E-10)
Second Layer:	
Liner 2 Thickness	SINGLE(0.002)
Liner 2 Hydraulic Conductivity	SINGLE(1.00E-12)
Justifications	

Liner	[Changed]	Site design
Liner Thickness	[Changed]	Site design
Liner Hydraulic Conductivity	[Changed]	Site design
Justification:	[Changed]	Default
Methane Oxidation %		SINGLE(10.0)
Justification:	[Default]	Default Value
Land Raise Depth		SINGLE(16.0)
Geosphere		
Ground Surface (mAOD)		106
Water Table (mAOD)		88
Geosphere Moisture Content		UNIFORM(5.0, 20.0)
Geosphere Porosity		UNIFORM(24.0, 53.0)
Cell 8		
Infiltration		SINGLE(900.0)
Justification:	[Changed]	Met Office
Waste Input		
Year		AmountDeposited (t)
2025		TRIANGULAR(2.34E+05, 2.60E+05, 2.86E+05)
2026		TRIANGULAR(2.35E+05, 2.61E+05, 2.87E+05)
2027		TRIANGULAR(1.98E+05, 2.20E+05, 2.42E+05)
Justification:	[Changed]	Cell Volume
Waste Breakdown		
2025		
Inert		UNIFORM(15.0, 20.0)
User Defined 1		UNIFORM(80.0, 85.0)
2026		
Inert		UNIFORM(15.0, 20.0)
User Defined 1		UNIFORM(80.0, 85.0)
2027		
Inert		UNIFORM(15.0, 20.0)
User Defined 1		UNIFORM(80.0, 85.0)
Justification:	[Default]	Client data
Trace Gases		
Source Gases		Concentration [mg/m3]
1,1,1,2-Tetrafluorochloroethane		LOGTRIANGULAR(0.002, 0.2, 2.0)
1,1,1-Trichlorotrifluoroethane		LOGTRIANGULAR(0.005, 0.4, 8.0)
1,1,2-Trichloroethane		LOGTRIANGULAR(0.004, 1.0, 10.0)
1,1-Dichloroethane		LOGTRIANGULAR(0.02, 0.28, 3.9)
1,1-Dichloroethene		LOGTRIANGULAR(0.03, 2.8, 19.0)
1,1-Dichlorotetrafluoroethane		LOGTRIANGULAR(0.05, 0.25, 6.4)
1,2-Dichloropropane		SINGLE(0.0)
1,2-Dichlorotetrafluoroethane		LOGTRIANGULAR(0.01, 9.8, 300.0)
1-butanethiol		LOGUNIFORM(1.00E-30, 8.00E-02)
1-Chloro-1,1-difluoroethane		LOGTRIANGULAR(0.04, 0.57, 31.0)
2-butoxy ethanol		LOGUNIFORM(1.00E-30, 5.00E-02)
2-Chloro-1,1,1-trifluoroethane		LOGUNIFORM(0.05, 1.5)
2-Propanol		LOGTRIANGULAR(0.005, 2.0, 34.0)
Acetaldehyde (ethanal)		LOGUNIFORM(0.075, 2.546)
Acetone		LOGTRIANGULAR(0.005, 0.1, 50.0)
Acrylonitrile		LOGTRIANGULAR(0.02, 0.4, 38.0)
Benzene		LOGTRIANGULAR(3.1, 15.0, 73.0)
Bromodichloromethane		SINGLE(0.0)
Butadiene (modelled as 1,3-Butadiene)		LOGUNIFORM(1.00E-30, 2.00E-02)
Butane		LOGTRIANGULAR(0.19, 1.0, 709.0)
Butene isomers		LOGTRIANGULAR(1.00E-03, 2.00E-01, 1.80E+00)
Butyric acid		LOGTRIANGULAR(1.00E-30, 1.00E-01, 1.75E+01)
Carbon disulphide		LOGUNIFORM(0.9, 170.0)
Carbon monoxide		LOGTRIANGULAR(0.11, 1.1, 5000.0)
Carbon tetrachloride (tetrachloromethane)		LOGUNIFORM(1.00E-30, 2.00E-02)
Carbonyl sulphide		LOGTRIANGULAR(0.006, 0.2, 4.4)
Chlorobenzene		LOGUNIFORM(0.002, 3000.0)
Chlorodifluoromethane		LOGTRIANGULAR(0.005, 0.1, 9900.0)
Chloroethane		LOGUNIFORM(1.00E-30, 5.30E+00)
Chlorofluorocarbons (CFCs) (Total)		LOGTRIANGULAR(0.06, 102.3, 1230.0)
Chlorofluoromethane		LOGTRIANGULAR(0.008, 0.2, 110.0)
Chloroform (trichloromethane)		LOGTRIANGULAR(1.00E-03, 2.00E-01, 7.00E+01)
Chlorotrifluoromethane		LOGTRIANGULAR(0.1, 0.2, 49.0)
Dichlorodifluoromethane		LOGTRIANGULAR(0.01, 9.0, 790.0)
Dichlorofluoromethane		LOGTRIANGULAR(1.00E-03, 1.00E-02, 6.02E+02)
Dichloromethane (methylene chloride)		LOGTRIANGULAR(1.00E-03, 2.00E-02, 1.52E+03)
Diethyl disulphide		LOGTRIANGULAR(1.00E-03, 2.00E-02, 2.60E+00)
Dimethyl disulphide		LOGTRIANGULAR(0.03, 0.17, 12.0)
Dimethyl sulphide		LOGTRIANGULAR(0.03, 0.73, 24.3)
Ethane		LOGTRIANGULAR(0.005, 6.25, 200.0)
Ethanethiol (ethyl mercaptan)		LOGUNIFORM(1.00E-30, 8.00E-02)
Ethanol		LOGTRIANGULAR(0.005, 0.2, 810.0)
Ethyl butyrate		LOGUNIFORM(0.41, 42.0)
Ethyl toluene (all isomers)		LOGTRIANGULAR(1.00E-03, 1.00E-02, 8.30E+00)
Ethylbenzene		LOGTRIANGULAR(1.00E-03, 1.00E-03, 8.75E+02)
Ethylene		UNIFORM(0.2, 5.8)
Ethylene dibromide		SINGLE(0.0)
Ethylene dichloride		LOGTRIANGULAR(0.006, 0.01, 1820.0)
Fluorotrichloromethane		LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.00E+03)
Formaldehyde (methanal)		LOGTRIANGULAR(0.026, 0.068, 0.188)
Freon 113		LOGTRIANGULAR(0.013, 4.8, 125.0)

Furan		LOGTRIANGULAR(0.02, 0.82, 6.2)
Halons		SINGLE(0.0)
Hexachlorocyclohexane (all isomers)		SINGLE(0.0)
Hexane		LOGTRIANGULAR(1.00E-03, 9.60E+00, 4.40E+01)
Hydrochlorofluorocarbons (HCFCs) (Total)		LOGTRIANGULAR(0.02, 128.8, 916.2)
Hydrofluorocarbons (HFCs) (Total)		SINGLE(0.0)
Hydrogen sulphide		LOGTRIANGULAR(10.0, 200.0, 750.0)
Limonene		LOGTRIANGULAR(1.00E-03, 1.00E-01, 2.40E+02)
Mercury		LOGUNIFORM(1.70E-04, 1.33E-03)
Methanethiol (methyl mercaptan)		LOGUNIFORM(1.00E-30, 3.00E-01)
Methyl chloride (chloromethane)		LOGTRIANGULAR(0.006, 0.2, 10.0)
Methyl chloroform (1,1,1-Trichloroethane)		LOGTRIANGULAR(1.00E-03, 1.80E+02, 1.60E+03)
Methyl ethyl ketone (2-butanone)		LOGTRIANGULAR(0.005, 0.005, 73.0)
Methyl isobutyl ketone		LOGTRIANGULAR(0.005, 0.2, 9.9)
Nitric acid		SINGLE(0.0)
Odour Units (Predicted)		TRIANGULAR(5.00E+04, 1.25E+05, 2.50E+05)
PAH (reported as Naphthalene)		LOGTRIANGULAR(1.00E-03, 2.00E-01, 1.70E+01)
para-Dichlorobenzene (modelled as 1,4-Dichlorobenzene)		LOGTRIANGULAR(0.006, 0.05, 2.7)
Pentane		LOGTRIANGULAR(0.02, 0.3, 105.0)
Pentene (all isomers)		LOGTRIANGULAR(0.24, 3.5, 12.0)
Perfluorocarbons (PFCs) (Total)		SINGLE(0.0)
Phenol		SINGLE(0.0)
PM10s		SINGLE(0.0)
Propane		LOGTRIANGULAR(1.00E-03, 1.90E+00, 1.29E+01)
Propanethiol		LOGUNIFORM(1.00E-30, 9.00E-02)
Sulphide, total simulations with H2S		LOGTRIANGULAR(1.00E-03, 2.40E+00, 5.58E+03)
Sulphide, total simulations without H2S		LOGTRIANGULAR(5.00E-04, 8.00E-03, 3.50E+00)
t-1,2-Dichloroethene		LOGTRIANGULAR(0.02, 0.24, 2.6)
Tetrachloroethane (modelled as 1,1,2,2-Tetrachloroethane)		LOGUNIFORM(1.00E-03, 5.00E+01)
Tetrachloroethylene (Tetrachloroethene)		LOGTRIANGULAR(1.00E-03, 1.00E-02, 7.70E+03)
Toluene		LOGTRIANGULAR(0.01, 0.1, 1250.0)
Trichlorobenzene (all isomers)		LOGTRIANGULAR(0.01, 0.01, 0.13)
Trichloroethylene (trichloroethene)		LOGTRIANGULAR(0.25, 1.65, 88.0)
Trichlorofluoromethane		LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.00E+03)
Trichlorotrifluoroethane		LOGTRIANGULAR(1.00E-03, 4.80E+00, 2.40E+01)
Trimethylbenzene (all isomers)		LOGTRIANGULAR(1.00E-03, 1.00E-02, 1.87E+02)
Vinyl chloride (chloroethene, chloroethylene)		LOGTRIANGULAR(1.1, 31.0, 730.0)
Xylene (all isomers)		LOGTRIANGULAR(1.00E-03, 1.00E-03, 6.18E+04)
Justification:	[Default]	Default Value
VOC Half-life		NORMAL(4.11, 1.56)
Justification:	[Default]	Default Value

Waste Moisture Content

Degradation rate - Filling Phase		Wet
Justification:	[Changed]	NRW Decision doc
Degradation rate - after change		Average
Justification:	[Default]	Default Value
Waste Density		UNIFORM(0.8, 1.2)
Justification:	[Default]	Default Value
Leachate Head		SINGLE(1.0)
Justification:	[Default]	Default Value
Hydraulic Conductivity		LOGUNIFORM(1.00E-09, 1.00E-05)
Justification:	[Default]	Default Value

Engineered Controls

Cap		Single Liner
Cap Thickness		SINGLE(1.00E-03)
Cap Hydraulic Conductivity		SINGLE(1.00E-11)
Justifications		
Cap	[Changed]	Site design
Cap Thickness	[Changed]	Site design
Cap Hydraulic Conductivity	[Changed]	Site design
liner		Composite
First Layer:		
Liner Thickness		UNIFORM(0.45, 0.55)
Liner Hydraulic Conductivity		SINGLE(5.00E-10)
Second Layer:		
Liner 2 Thickness		SINGLE(0.002)
Liner 2 Hydraulic Conductivity		SINGLE(1.00E-12)
Justifications		
Liner	[Changed]	Site design
Liner Thickness	[Changed]	Site design
Liner Hydraulic Conductivity	[Changed]	Site design
Justification:	[Changed]	Default
Methane Oxidation %		SINGLE(10.0)
Justification:	[Default]	Default Value
Land Raise Depth		SINGLE(16.0)

Geosphere

Ground Surface (mAOD)		106
Water Table (mAOD)		88
Geosphere Moisture Content		UNIFORM(5.0, 20.0)
Geosphere Porosity		UNIFORM(24.0, 53.0)

Site Characteristics

Proportion to CO2 [%]		SINGLE(50.0)
Justification:	[Default]	Default Value

Proportion to CH4 [%]
Justification: [Default]

Cellulose Decay Rates

	Slow	Moderate	Fast
Dry	SINGLE(0.013)	SINGLE(0.046)	SINGLE(0.076)
Average	SINGLE(0.046)	SINGLE(0.076)	SINGLE(0.116)
Wet	SINGLE(0.076)	SINGLE(0.116)	SINGLE(0.694)
Saturated	SINGLE(0.013)	SINGLE(0.046)	SINGLE(0.076)
User Defined 1	SINGLE(0.046)	UNIFORM(0.046, 0.07	UNIFORM(0.076, 0.11
User Defined 2	UNIFORM(0.046, 0.07	UNIFORM(0.076, 0.11	UNIFORM(0.116, 0.69
Justification:	[Default] Default Value		

Gas Plant

<i>Engine</i>	Spark Ignition Engine	
January 2021 to December 2045	160 to 260	Downtime [%]: UNIFORM(3.0, 5.0)
Justification:	Based on Gas Curve	
Destruction Efficiency CH	Default Value	
Destruction Efficiency H2	Default Value	
Properties	Manufacturer Spec	
<i>Flare 1</i>	Flare	
January 2021 to December 2060	50 to 500	Downtime [%]: UNIFORM(3.0, 5.0)
Justification:	Based on Gas Curve	
Destruction Efficiency CH	Not Justified	
Destruction Efficiency H2	Not Justified	
Properties	Manufacturer Spec	
Engine/Flare Order	Engine first	

Trace Gas Plant

1,1,1,2-Tetrafluorochloroethane

Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)

1,1,1-Trichlorotrifluoroethane

Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)

1,1,2-Trichloroethane

Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)

1,1-Dichloroethane

Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)

1,1-Dichloroethene

Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)

1,1-Dichlorotetrafluoroethane

Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)

1,2-Dichloropropane

Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
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Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>1,2-Dichlorotetrafluoroethane</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>1-butanethiol</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>1-Chloro-1,1-difluoroethane</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>2-butoxy ethanol</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>2-Chloro-1,1,1-trifluoroethane</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>2-Propanol</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Acetaldehyde (ethanal)</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Acetone</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Acrylonitrile</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)

Flare:	non-combustion products	SINGLE(99.0)
<i>Benzene</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Benzo(a)pyrene</i>		
Spark Ignition Engine:	combustion products	LOGUNIFORM(1.10E-12, 9.60E-10)
Dual Fuel Engine:	combustion products	LOGUNIFORM(1.10E-12, 9.60E-10)
Other Engine:	combustion products	SINGLE(0.0)
Flare:	combustion products	LOGUNIFORM(1.00E-06, 6.00E-04)
<i>Bromodichloromethane</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Butadiene (modelled as 1,3-Butadiene)</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Butane</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Butene isomers</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Butyric acid</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Carbon disulphide</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Carbon monoxide</i>		
Spark Ignition Engine:	combustion products	SINGLE(1.40E+03)
Dual Fuel Engine:	combustion products	SINGLE(0.0)
Other Engine:	combustion products	SINGLE(0.0)
Flare:	combustion products	SINGLE(50.0)
<i>Carbon tetrachloride (tetrachloromethane)</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Carbonyl sulphide</i>		

Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Chlorobenzene</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Chlorodifluoromethane</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Chloroethane</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Chlorofluorocarbons (CFCs) (Total)</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Chlorofluoromethane</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Chloroform (trichloromethane)</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Chlorotrifluoromethane</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Dichlorodifluoromethane</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Dichlorofluoromethane</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)

Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Dichloromethane (methylene chloride)</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Diethyl disulphide</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Dimethyl disulphide</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Dimethyl sulphide</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Dioxins and furans (modelled as 2,3,7,8-TCDD)</i>		
Spark Ignition Engine:	combustion products	LOGUNIFORM(7.00E-10, 2.30E-06)
Dual Fuel Engine:	combustion products	LOGUNIFORM(7.00E-10, 2.30E-06)
Other Engine:	combustion products	SINGLE(0.0)
Flare:	combustion products	LOGTRIANGULAR(9.00E-09, 3.10E-08, 3.60)
<i>Ethane</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Ethanethiol (ethyl mercaptan)</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Ethanol</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Ethyl butyrate</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Ethyl toluene (all isomers)</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)

Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Ethylbenzene</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Ethylene</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Ethylene dibromide</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Ethylene dichloride</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Fluorotrichloromethane</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Formaldehyde (methanal)</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Freon 113</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Furan</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Halons</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)

Flare:	non-combustion products	SINGLE(99.0)
<i>Hexachlorocyclohexane (all isomers)</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Hexane</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Hydrochlorofluorocarbons (HCFCs) (Total)</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Hydrofluorocarbons (HFCs) (Total)</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Hydrogen chloride, or (Total chloride (reported as HCl))</i>		
Spark Ignition Engine:	combustion products	LOGTRIANGULAR(5.00E-04, 1.00E+01, 5.84
Dual Fuel Engine:	combustion products	SINGLE(0.0)
Other Engine:	combustion products	SINGLE(0.0)
Flare:	combustion products	LOGUNIFORM(0.5, 36.0)
<i>Hydrogen fluoride, or (Total fluoride (reported as HF))</i>		
Spark Ignition Engine:	combustion products	LOGTRIANGULAR(2.00E-04, 7.00E+00, 4.50
Dual Fuel Engine:	combustion products	SINGLE(0.0)
Other Engine:	combustion products	SINGLE(0.0)
Flare:	combustion products	LOGUNIFORM(0.4, 21.0)
<i>Hydrogen sulphide</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Limonene</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Mercury</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Methanethiol (methyl mercaptan)</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Methyl chloride (chloromethane)</i>		

Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Methyl chloroform (1,1,1-Trichloroethane)</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Methyl ethyl ketone (2-butanone)</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Methyl isobutyl ketone</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Nitric acid</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Nitrogen dioxide (NO2)</i>		
Spark Ignition Engine:	combustion products	SINGLE(0.0)
Dual Fuel Engine:	combustion products	SINGLE(0.0)
Other Engine:	combustion products	SINGLE(0.0)
Flare:	combustion products	SINGLE(0.0)
<i>Nitrogen monoxide (NO)</i>		
Spark Ignition Engine:	combustion products	SINGLE(0.0)
Dual Fuel Engine:	combustion products	SINGLE(0.0)
Other Engine:	combustion products	SINGLE(0.0)
Flare:	combustion products	SINGLE(0.0)
<i>Nitrogen oxides (NOx)</i>		
Spark Ignition Engine:	combustion products	SINGLE(500.0)
Dual Fuel Engine:	combustion products	SINGLE(0.0)
Other Engine:	combustion products	SINGLE(0.0)
Flare:	combustion products	SINGLE(150.0)
<i>Odour Units (Predicted)</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>PAH (reported as Naphthalene)</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>para-Dichlorobenzene (modelled as 1,4-Dichlorobenzene)</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)

<i>Pentane</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Pentene (all isomers)</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Perfluorocarbons (PFCs) (Total)</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Phenol</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>PM10s</i>		
Spark Ignition Engine:	combustion products	TRIANGULAR(1.2, 4.6, 12.5)
Dual Fuel Engine:	combustion products	SINGLE(0.0)
Other Engine:	combustion products	SINGLE(0.0)
Flare:	combustion products	UNIFORM(1.0, 10.0)
<i>Propane</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Propanethiol</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Sulphide, total simulations with H2S</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Sulphide, total simulations without H2S</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Sulphur dioxide</i>		
Spark Ignition Engine:	combustion products from parent species	SINGLE(99.0)
Dual Fuel Engine:	combustion products	SINGLE(0.0)
Other Engine:	combustion products	SINGLE(0.0)
Flare:	combustion products	UNIFORM(0.0, 482.0)
<i>t-1,2-Dichloroethene</i>		

Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Tetrachloroethane (modelled as 1,1,2,2-Tetrachloroethane)</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Tetrachloroethylene (Tetrachloroethene)</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Toluene</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Total non-methane volatile organic compounds (NMVOCs)</i>		
Spark Ignition Engine:	combustion products	LOGTRIANGULAR(0.0118, 18.1, 90.0)
Dual Fuel Engine:	combustion products	TRIANGULAR(0.0118, 18.1, 90.0)
Other Engine:	combustion products	SINGLE(0.0)
Flare:	combustion products	LOGUNIFORM(1.0, 30.0)
<i>Total volatile organic compounds (VOCs)</i>		
Spark Ignition Engine:	combustion products	LOGTRIANGULAR(0.0118, 18.1, 90.0)
Dual Fuel Engine:	combustion products	SINGLE(0.0)
Other Engine:	combustion products	SINGLE(0.0)
Flare:	combustion products	LOGUNIFORM(52.0, 3920.0)
<i>Trichlorobenzene (all isomers)</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Trichloroethylene (trichloroethene)</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Trichlorofluoromethane</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Trichlorotrifluoroethane</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Trimethylbenzene (all isomers)</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)

Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Vinyl chloride (chloroethene, chloroethylene)</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
<i>Xylene (all isomers)</i>		
Spark Ignition Engine:	non-combustion products	SINGLE(99.0)
Dual Fuel Engine:	non-combustion products	SINGLE(99.0)
Other Engine:	non-combustion products	SINGLE(99.0)
Flare:	non-combustion products	SINGLE(99.0)
Justification:	[Changed]	H2S as per NRW request

Global Impact

Bulk Gases

Global Warming Potential

Carbon Dioxide [t]:	1
Methane [t carbon dioxide]:	25
Hydrogen [t carbon dioxide]:	0
Justification:	[Default] Default Value

Ozone Depletion Potential

Carbon Dioxide [t trichlorofluoromethane]:	0
Methane [t trichlorofluoromethane]:	0
Hydrogen [t trichlorofluoromethane]:	0
Justification:	[Default] Default Value

Trace Gases

Gas	Global Warming Potential	Ozone Depletion Potential
1,1,1,2-Tetrafluorochloroethane	609	0.02
1,1,1-Trichlorotrifluoroethane	6130	1
1,1,2-Trichloroethane	0	0
1,1-Dichloroethane	0	0
1,1-Dichloroethene	0	0
1,1-Dichlorotetrafluoroethane	10000	0.94
1,2-Dichloropropane	0	0
1,2-Dichlorotetrafluoroethane	0	0
1-butanethiol	0	0
1-Chloro-1,1-difluoroethane	2310	0.07
2-butoxy ethanol	0	0
2-Chloro-1,1,1-trifluoroethane	0	0
2-Propanol	0	0
Acetaldehyde (ethanal)	1.3	0
Acetone	0.5	0
Acrylonitrile	0	0
Benzene	0	0
Benzo(a)pyrene	0	0
Bromodichloromethane	1300	1890
Butadiene (modelled as 1,3-Butadiene)	0	0
Butane	4	0
Butene isomers	0	0
Butyric acid	0	0
Carbon disulphide	0	0
Carbon monoxide	0	0
Carbon tetrachloride (tetrachloromethane)	1400	0.73
Carbonyl sulphide	0	0
Chlorobenzene	0	0
Chlorodifluoromethane	1810	0.05
Chloroethane	0	0
Chlorofluorocarbons (CFCs) (Total)	0	0
Chlorofluoromethane	0	0
Chloroform (trichloromethane)	30	0
Chlorotrifluoromethane	14400	0
Dichlorodifluoromethane	10900	1
Dichlorofluoromethane	210	0
Dichloromethane (methylene chloride)	9	0
Diethyl disulphide	0	0
Dimethyl disulphide	0	0
Dimethyl sulphide	0	0
Dioxins and furans (modelled as 2,3,7,8-TCDD)	0	0
Ethane	5.5	0
Ethanethiol (ethyl mercaptan)	0	0
Ethanol	0	0
Ethyl butyrate	0	0

Ethyl toluene (all isomers)	0	0
Ethylbenzene	0	0
Ethylene	3.7	0
Ethylene dibromide	0	0
Ethylene dichloride	0	0
Fluorotrichloromethane	4750	1
Formaldehyde (methanal)	0	0
Freon 113	6130	1
Furan	0	0
Halons	0	0
Hexachlorocyclohexane (all isomers)	0	0
Hexane	0	0
Hydrochlorofluorocarbons (HCFCs) (Total)	0	0
Hydrofluorocarbons (HFCs) (Total)	0	0
Hydrogen chloride, or (Total chloride (reported as HCl))	0	0
Hydrogen fluoride, or (Total fluoride (reported as HF))	0	0
Hydrogen sulphide	0	0
Limonene	0	0
Mercury	0	0
Methanethiol (methyl mercaptan)	0	0
Methyl chloride (chloromethane)	146	0
Methyl chloroform (1,1,1-Trichloroethane)	0	0
Methyl ethyl ketone (2-butanone)	0	0
Methyl isobutyl ketone	0	0
Nitric acid	0	0
Nitrogen dioxide (NO2)	0	0
Nitrogen monoxide (NO)	0	0
Nitrogen oxides (NOx)	0	0
Odour Units (Predicted)	0	0
PAH (reported as Naphthalene)	0	0
para-Dichlorobenzene (modelled as 1,4-Dichlorobenzene)	0	0
Pentane	0	0
Pentene (all isomers)	0	0
Perfluorocarbons (PFCs) (Total)	0	0
Phenol	0	0
PM10s	0	0
Propane	3.3	0
Propanethiol	0	0
Sulphide, total simulations with H2S	0	0
Sulphide, total simulations without H2S	0	0
Sulphur dioxide	0	0
t-1,2-Dichloroethene	0	0
Tetrachloroethane (modelled as 1,1,2,2-Tetrachloroethane)	0	0
Tetrachloroethylene (Tetrachloroethene)	0	0
Toluene	2.7	0
Total non-methane volatile organic compounds (NMVOCs)	0	0
Total volatile organic compounds (VOCs)	0	0
Trichlorobenzene (all isomers)	0	0
Trichloroethylene (trichloroethene)	0	0
Trichlorofluoromethane	4750	1
Trichlorotrifluoroethane	6130	1
Trimethylbenzene (all isomers)	0	0
Vinyl chloride (chloroethene, chloroethyle	0	0
Xylene (all isomers)	0	0

Lateral Migration

Bulk Gases

Air Diffusion Coefficients	
CO2 Dispersivity	SINGLE(0.1613)
CH4 Dispersivity	SINGLE(0.2192)
H2 Dispersivity	#UNDEFINED?
Justification:	[Default] Default Value

Geosphere

Cell	Cell 1a
Geosphere Moisture Content	UNIFORM(5.0, 20.0)
Geosphere Porosity	UNIFORM(24.0, 53.0)
Cell	Cell 1b
Geosphere Moisture Content	UNIFORM(5.0, 20.0)
Geosphere Porosity	UNIFORM(24.0, 53.0)
Cell	Cell 2a
Geosphere Moisture Content	UNIFORM(5.0, 20.0)
Geosphere Porosity	UNIFORM(24.0, 53.0)
Cell	Cell 2b
Geosphere Moisture Content	UNIFORM(5.0, 20.0)
Geosphere Porosity	UNIFORM(24.0, 53.0)
Cell	Cell 3a
Geosphere Moisture Content	UNIFORM(5.0, 20.0)
Geosphere Porosity	UNIFORM(24.0, 53.0)
Cell	Cell 3b
Geosphere Moisture Content	UNIFORM(5.0, 20.0)
Geosphere Porosity	UNIFORM(24.0, 53.0)
Cell	Cell 4a

Geosphere Moisture Content	UNIFORM(5.0, 20.0)
Geosphere Porosity	UNIFORM(24.0, 53.0)
Cell	Cell 4b
Geosphere Moisture Content	UNIFORM(5.0, 20.0)
Geosphere Porosity	UNIFORM(24.0, 53.0)
Cell	Cell 5a
Geosphere Moisture Content	UNIFORM(5.0, 20.0)
Geosphere Porosity	UNIFORM(24.0, 53.0)
Cell	Cell 5b
Geosphere Moisture Content	UNIFORM(5.0, 20.0)
Geosphere Porosity	UNIFORM(24.0, 53.0)
Cell	Cell 6a
Geosphere Moisture Content	UNIFORM(5.0, 20.0)
Geosphere Porosity	UNIFORM(24.0, 53.0)
Cell	Cell 6b
Geosphere Moisture Content	UNIFORM(5.0, 20.0)
Geosphere Porosity	UNIFORM(24.0, 53.0)
Cell	Cell 7a
Geosphere Moisture Content	UNIFORM(5.0, 20.0)
Geosphere Porosity	UNIFORM(24.0, 53.0)
Cell	Cell 7b
Geosphere Moisture Content	UNIFORM(5.0, 20.0)
Geosphere Porosity	UNIFORM(24.0, 53.0)
Cell	Cell 8
Geosphere Moisture Content	UNIFORM(5.0, 20.0)
Geosphere Porosity	UNIFORM(24.0, 53.0)
Justification: [Changed]	LandSim default
Trace Gases	
Gas	Air Diffusion Coefficient
1,1,1,2-Tetrafluorochloroethane	SINGLE(0.071)
1,1,1-Trichlorotrifluoroethane	#UNDEFINED?
1,1,2-Trichloroethane	#UNDEFINED?
1,1-Dichloroethane	SINGLE(0.0742)
1,1-Dichloroethene	#UNDEFINED?
1,1-Dichlorotetrafluoroethane	#UNDEFINED?
1,2-Dichloropropane	#UNDEFINED?
1,2-Dichlorotetrafluoroethane	#UNDEFINED?
1-butanethiol	#UNDEFINED?
1-Chloro-1,1-difluoroethane	#UNDEFINED?
2-butoxy ethanol	#UNDEFINED?
2-Chloro-1,1,1-trifluoroethane	#UNDEFINED?
2-Propanol	#UNDEFINED?
Acetaldehyde (ethanal)	SINGLE(0.1235)
Acetone	#UNDEFINED?
Acrylonitrile	#UNDEFINED?
Benzene	SINGLE(0.088)
Benzo(a)pyrene	SINGLE(0.043)
Bromodichloromethane	#UNDEFINED?
Butadiene (modelled as 1,3-Butadiene)	SINGLE(0.102)
Butane	#UNDEFINED?
Butene isomers	SINGLE(0.0977)
Butyric acid	#UNDEFINED?
Carbon disulphide	SINGLE(0.108)
Carbon monoxide	SINGLE(0.2013)
Carbon tetrachloride (tetrachloromethane)	SINGLE(0.078)
Carbonyl sulphide	#UNDEFINED?
Chlorobenzene	SINGLE(0.073)
Chlorodifluoromethane	#UNDEFINED?
Chloroethane	SINGLE(0.1085)
Chlorofluorocarbons (CFCs) (Total)	SINGLE(0.0826)
Chlorofluoromethane	#UNDEFINED?
Chloroform (trichloromethane)	SINGLE(0.104)
Chlorotrifluoromethane	#UNDEFINED?
Dichlorodifluoromethane	#UNDEFINED?
Dichlorofluoromethane	#UNDEFINED?
Dichloromethane (methylene chloride)	SINGLE(0.099)
Diethyl disulphide	#UNDEFINED?
Dimethyl disulphide	SINGLE(0.0898)
Dimethyl sulphide	SINGLE(0.0898)
Dioxins and furans (modelled as 2,3,7,8-TCDD)	SINGLE(0.104)
Ethane	#UNDEFINED?
Ethanethiol (ethyl mercaptan)	#UNDEFINED?
Ethanol	#UNDEFINED?
Ethyl butyrate	#UNDEFINED?
Ethyl toluene (all isomers)	SINGLE(0.0796)
Ethylbenzene	#UNDEFINED?
Ethylene	SINGLE(0.0796)
Ethylene dibromide	#UNDEFINED?
Ethylene dichloride	SINGLE(0.104)
Fluorotrichloromethane	#UNDEFINED?
Formaldehyde (methanal)	SINGLE(0.1591)
Freon 113	#UNDEFINED?
Furan	#UNDEFINED?
Halons	SINGLE(0.0754)
Hexachlorocyclohexane (all isomers)	#UNDEFINED?
Hexane	#UNDEFINED?
Hydrochlorofluorocarbons (HCFCs) (Total)	SINGLE(0.0967)

Hydrofluorocarbons (HFCs) (Total)	#UNDEFINED?
Hydrogen chloride, or (Total chloride (reported as HCl))	SINGLE(0.1763)
Hydrogen fluoride, or (Total fluoride (reported as HF))	SINGLE(0.2081)
Hydrogen sulphide	SINGLE(0.1623)
Limonene	#UNDEFINED?
Mercury	#UNDEFINED?
Methanethiol (methyl mercaptan)	#UNDEFINED?
Methyl chloride (chloromethane)	SINGLE(0.1724)
Methyl chloroform (1,1,1-Trichloroethane)	SINGLE(0.078)
Methyl ethyl ketone (2-butanone)	#UNDEFINED?
Methyl isobutyl ketone	#UNDEFINED?
Nitric acid	#UNDEFINED?
Nitrogen dioxide (NO2)	SINGLE(0.2276)
Nitrogen monoxide (NO)	SINGLE(0.2276)
Nitrogen oxides (NOx)	SINGLE(0.2276)
Odour Units (Predicted)	#UNDEFINED?
PAH (reported as Naphthalene)	SINGLE(0.059)
para-Dichlorobenzene (modelled as 1,4-Dichlorobenzene)	SINGLE(0.069)
Pentane	SINGLE(0.1999)
Pentene (all isomers)	SINGLE(0.1999)
Perfluorocarbons (PFCs) (Total)	SINGLE(0.071)
Phenol	#UNDEFINED?
PM10s	#UNDEFINED?
Propane	#UNDEFINED?
Propanethiol	#UNDEFINED?
Sulphide, total simulations with H2S	#UNDEFINED?
Sulphide, total simulations without H2S	#UNDEFINED?
Sulphur dioxide	SINGLE(0.1289)
t-1,2-Dichloroethene	#UNDEFINED?
Tetrachloroethane (modelled as 1,1,2,2-Tetrachloroethane)	SINGLE(0.071)
Tetrachloroethylene (Tetrachloroethene)	SINGLE(0.072)
Toluene	SINGLE(0.087)
Total non-methane volatile organic compounds (NMVOCs)	#UNDEFINED?
Total volatile organic compounds (VOCs)	#UNDEFINED?
Trichlorobenzene (all isomers)	SINGLE(0.03)
Trichloroethylene (trichloroethene)	SINGLE(0.079)
Trichlorofluoromethane	#UNDEFINED?
Trichlorotrifluoroethane	#UNDEFINED?
Trimethylbenzene (all isomers)	SINGLE(0.0619)
Vinyl chloride (chloroethene, chloroethyle	SINGLE(0.1126)
Xylene (all isomers)	SINGLE(0.0684)
Justification:	[Default] Default Value