

MIGRATEv10

Version 10.00
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Case 8: Concentration Profile for a Buried Landfill

Layer Properties

Layer	Thickness	Sublayers	Dry Density	Porosity	Distribution Coefficient	Half-Life
Layer 1	1 m	2	0 g/cm ³	0.4	0 mL/g	0 year
Layer 2	5 m	5	0 g/cm ³	0.4	0 mL/g	0 year
Layer 3	2 m	4	0 g/cm ³	0.4	0 mL/g	0 year

Layer	Vertical Diffusion	Horizontal Diffusion	Vertical Velocity	Horizontal Velocity	Sink Removal	Concentration	
Layer 1	0.01 m ² /a	0.01 m ² /a	0.01 m/a	0 m/a	0 m/a	0 mL/g	
Layer 2	0.02 m ² /a	0.02 m ² /a	0.01 m/a	0 m/a	0 m/a	1500 mL/g	
Layer 3	0.01 m ² /a	0.01 m ² /a	0.01 m/a	0 m/a	0 m/a	0 mL/g	

Boundary Conditions

Zero Concentration Top Boundary

	Cell 1
Offset	0 m
Surface Width	200 m
Base Width	200 m

Aquifer Bottom Boundary

Base Thickness	1 m
Base Half-Life	0 year
Base Porosity	0.3
Sink Removal	0 m/a
Outflow Velocity	10 m/a
Dispersion Coefficient	0 m ² /a

Laplace Transform Parameters

TAU	7
N	11
SIG	0
RNU	1

Gauss Integration Parameters

Integration Level	Normal
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Subinterval Size	0.1
Number of Subintervals	12
Number of Sample Points per Step	0
Total Width of Integration	1.2
Total Number of Integration Points	480

Calculated Concentrations at Selected Depths, Lateral Distances and Times

Time year	Distance m	Depth m	Concentration mg/L
300	100	0.00000E+00	0.00000E+00
		5.00000E-01	1.39893E+00
		1.00000E+00	5.50830E+00
		2.00000E+00	1.51198E+01
		3.00000E+00	3.27262E+01
		4.00000E+00	6.05902E+01
		5.00000E+00	9.77574E+01
		6.00000E+00	1.34072E+02
		6.50000E+00	1.62826E+02
		7.00000E+00	1.89097E+02
		7.50000E+00	1.98116E+02
		8.00000E+00	1.46014E+02
300	200	0.00000E+00	0.00000E+00
		5.00000E-01	2.81110E-04
		1.00000E+00	1.38767E-03
		2.00000E+00	6.15541E-03
		3.00000E+00	2.66345E-02
		4.00000E+00	1.08736E-01
		5.00000E+00	4.14268E-01
		6.00000E+00	1.46232E+00
		6.50000E+00	4.88877E+00
		7.00000E+00	1.58619E+01
		7.50000E+00	4.99946E+01
		8.00000E+00	1.52530E+02

Total Mass into Soil	Total Mass into Base	Velocity Transport	Mass in Base -WY/2 to +WY/2
-7.60366E+03	4.81214E+05	4.45092E+05	3.61224E+04

NOTICE

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