

POLLUTEv10

Version 10.00
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GAEA Technologies Ltd., R.K. Rowe and J.R. Booker

Case 7: Fractured rock and radioactive decay

THE DARCY VELOCITY (Flux) THROUGH THE LAYERS $V_a = 0.08$ m/a

Layer Properties

Layer	Thickness	Number of Sublayers	Coefficient of Hydrodynamic Dispersion	Matrix Porosity	Distribution Coefficient	Dry Density
Fractured Rock	50 m	5	0.0018 m ² /a	0.05	0 m ³ /kg	2 g/cm ³

Layer	Dispersion Coefficient in Fractures	Distribution Coefficient in Fractures	Fracture Porosity
Fractured Rock	6 m ² /a	0 m ³ /kg	0.0000E+00

Layer	Fracture Spacing 1	Opening Size 1	Number
Fractured Rock	0.05 m	1E-5 m	10

Boundary Conditions

Constant Concentration Top Boundary

Source Concentration	1 mg/L
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Infinite Thickness Bottom Boundary

Radioactive or Biological Decay

Radioactive or Biological Decay Source Half Life = 100 year

Radioactive or Biological Decay Base Half Life = 100 year

First Order Radioactive or Biological Decay Depth Ranges

Minimum Depth	Maximum Depth	Half Life
0 m	50 m	100 year

Laplace Transform Parameters

TAU	7
N	40
SIG	0
RNU	4

Calculated Concentrations at Selected Times and Depths

Time year	Depth m	Concentration mg/L
30	0.00000E+00	8.12264E-01
	1.00000E+01	8.12264E-01
	3.00000E+01	8.12261E-01
	4.00000E+01	7.88144E-01
	5.00000E+01	2.58812E-01

NOTICE

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