

Table 1E - Domenico Dispersion Model Sensitivity Analysis Values
100 Long Ridge Road
Carlisle, Massachusetts

Original Model

Line No.	Source Description	End Point Description	Source Concentration			Hydraulic			Organic Carbon			1st Order Decay Coeff*	Time (Steady State)	Long. Dispersivity	Vert. Dispersivity	Trans. Dispersivity	POC Coords X	POC Coords Y	POC Coords Z	Predicted Concentration at the POC	Factor Change
			n	Source Width	Source Depth	Conductivity	Gradient	Porosity	Bulk Density	Content	Koc										
1	Septic 1	Well At #68	19.0	75.10	6.0	19.1	0.079	0.35	1.59	0.02	0.00	0.00	10,950	9.88	0.10	0.99	166.6	37.50	0.00	2.48	-

Sensitivity Analysis

Parameter	Result	Assumeed	Known	Assumed	Observed	Observed	Literature	Literature	Literature	Assumed	Assumed	Assumed	Literature Calculated	Literature Calculated	Literature Calculated	Known	Known	Assumed	Predicted		
1	Septic 1	Well At #68	19.0	75.10	12.0	19.1	0.079	0.35	1.59	0.02	0.00	0.00	10,950	9.88	0.099	0.99	166.6	37.50	0.00	4.70	2.00
1	Septic 1	Well At #68	19.0	75.10	6.0	19.1	0.079	0.35	1.59	0.02	0.00	0.00	10,950	9.88	0.099	0.99	166.6	37.50	0.00	2.48	1.00
1	Septic 1	Well At #68	19.0	75.10	3.0	19.1	0.079	0.35	1.59	0.02	0.00	0.00	10,950	9.88	0.099	0.99	166.6	37.50	0.00	1.26	0.50
1	Septic 1	Well At #68	19.0	75.10	1.5	19.1	0.079	0.35	1.59	0.02	0.00	0.00	10,950	9.88	0.099	0.99	166.6	37.50	0.00	0.63	0.25
1	Septic 1	Well At #68	19.0	75.10	6.0	109.0	0.079	0.35	1.59	0.02	0.00	0.00	10,950	9.88	0.099	0.99	166.6	37.50	0.00	2.48	10.00
1	Septic 1	Well At #68	19.0	75.10	6.0	10.9	0.079	0.35	1.59	0.02	0.00	0.00	10,950	9.88	0.099	0.99	166.6	37.50	0.00	2.48	1.00
1	Septic 1	Well At #68	19.0	75.10	6.0	1.09	0.079	0.35	1.59	0.02	0.00	0.00	10,950	9.88	0.099	0.99	166.6	37.50	0.00	2.48	0.10
1	Septic 1	Well At #68	19.0	75.10	6.0	0.109	0.079	0.35	1.59	0.02	0.00	0.00	10,950	9.88	0.099	0.99	166.6	37.50	0.00	2.48	0.01
1	Septic 1	Well At #68	19.0	75.10	6.0	19.1	0.79	0.35	1.59	0.02	0.00	0.00	10,950	9.88	0.099	0.99	166.6	37.50	0.00	2.48	10.00
1	Septic 1	Well At #68	19.0	75.10	6.0	19.1	0.079	0.35	1.59	0.02	0.00	0.00	10,950	9.88	0.099	0.99	166.6	37.50	0.00	2.48	1.00
1	Septic 1	Well At #68	19.0	75.10	6.0	19.1	0.0079	0.35	1.59	0.02	0.00	0.00	10,950	9.88	0.099	0.99	166.6	37.50	0.00	2.48	0.10
1	Septic 1	Well At #68	19.0	75.10	6.0	19.1	0.079	0.45	1.59	0.02	0.00	0.00	10,950	9.88	0.099	0.99	166.6	37.50	0.00	2.48	1.29
1	Septic 1	Well At #68	19.0	75.10	6.0	19.1	0.079	0.40	1.59	0.02	0.00	0.00	10,950	9.88	0.099	0.99	166.6	37.50	0.00	2.48	1.14
1	Septic 1	Well At #68	19.0	75.10	6.0	19.1	0.079	0.35	1.59	0.02	0.00	0.00	10,950	9.88	0.099	0.99	166.6	37.50	0.00	2.48	1.00
1	Septic 1	Well At #68	19.0	75.10	6.0	19.1	0.079	0.30	1.59	0.02	0.00	0.00	10,950	9.88	0.099	0.99	166.6	37.50	0.00	2.48	0.86
1	Septic 1	Well At #68	19.0	75.10	6.0	19.1	0.079	0.25	1.59	0.02	0.00	0.00	10,950	9.88	0.099	0.99	166.6	37.50	0.00	2.48	0.71
1	Septic 1	Well At #68	19.0	75.10	6.0	19.1	0.079	0.20	1.59	0.02	0.00	0.00	10,950	9.88	0.099	0.99	166.6	37.50	0.00	2.48	0.57
1	Septic 1	Well At #68	19.0	75.10	6.0	19.1	0.079	0.35	1.59	0.02	0.00	0.00	10,950	9.88	0.099	0.99	166.6	37.50	1.00	2.47	1.00
1	Septic 1	Well At #68	19.0	75.10	6.0	19.1	0.079	0.35	1.59	0.02	0.00	0.00	10,950	9.88	0.099	0.99	166.6	37.50	2.00	2.46	2.00
1	Septic 1	Well At #68	19.0	75.10	6.0	19.1	0.079	0.35	1.59	0.02	0.00	0.00	10,950	9.88	0.099	0.99	166.6	37.50	4.00	2.42	4.00
1	Septic 1	Well At #68	19.0	75.10	6.0	19.1	0.079	0.35	1.59	0.02	0.00	0.00	10,950	9.88	0.099	0.99	166.6	37.50	8.00	2.26	8.00
1	Septic 1	Well At #68	19.0	75.10	6.0	19.1	0.079	0.35	1.59	0.02	0.00	0.00	10,950	9.88	0.099	0.99	166.6	37.50	10.00	2.14	10.00
1	Septic 1	Well At #68	19.0	75.10	6.0	19.1	0.079	0.35	1.59	0.02	0.00	0.00	10,950	9.88	0.099	0.99	166.6	37.50	12.00	2.01	12.00
1	Septic 1	Well At #68	19.0	75.10	6.0	19.1	0.079	0.35	1.59	0.02	0.00	0.00	10,950	98.83	0.099	0.99	166.6	37.50	0.00	2.48	10.00
1	Septic 1	Well At #68	19.0	75.10	6.0	19.1	0.079	0.35	1.59	0.02	0.00	0.00	10,950	9.88	0.099	0.99	166.6	37.50	0.00	2.48	1.00
1	Septic 1	Well At #68	19.0	75.10	6.0	19.1	0.079	0.35	1.59	0.02	0.00	0.00	10,950	0.99	0.099	0.99	166.6	37.50	0.00	2.48	0.10
1	Septic 1	Well At #68	19.0	75.10	6.0	19.1	0.079	0.35	1.59	0.02	0.00	0.00	10,950	0.099	0.099	0.99	166.6	37.50	0.00	2.48	0.01
1	Septic 1	Well At #68	19.0	75.10	6.0	19.1	0.079	0.35	1.59	0.02	0.00	0.00	10,950	0.0099	0.099	0.99	166.6	37.50	0.00	2.48	0.001
1	Septic 1	Well At #68	19.0	75.10	6.0	19.1	0.079	0.35	1.59	0.02	0.00	0.00	10,950	9.88	0.99	0.99	166.6	37.50	0.00	2.47	9.98
1	Septic 1	Well At #68	19.0	75.10	6.0	19.1	0.079	0.35	1.59	0.02	0.00	0.00	10,950	9.88	0.099	0.99	166.6	37.50	0.00	2.48	1.00
1	Septic 1	Well At #68	19.0	75.10	6.0	19.1	0.079	0.35	1.59	0.02	0.00	0.00	10,950	9.88	0.0099	0.99	166.6	37.50	0.00	2.52	0.10
1	Septic 1	Well At #68	19.0	75.10	6.0	19.1	0.079	0.35	1.59	0.02	0.00	0.00	10,950	9.88	0.00099	0.99	166.6	37.50	0.00	2.63	0.01
1	Septic 1	Well At #68	19.0	75.10	6.0	19.1	0.079	0.35	1.59	0.02	0.00	0.00	10,950	9.88	0.000099	0.99	166.6	37.50	0.00	3.00	0.001
1	Septic 1	Well At #68	19.0	75.10	6.0	19.1	0.079	0.35	1.59	0.02	0.00	0.00	10,950	9.88	0.099	9.88	166.6	37.50	0.00	0.80	9.98
1	Septic 1	Well At #68	19.0	75.10	6.0	19.1	0.079	0.35	1.59	0.02	0.00	0.00	10,950	9.88	0.099	0.99	166.6	37.50	0.00	2.48	1.00
1	Septic 1	Well At #68	19.0	75.10	6.0	19.1	0.079	0.35	1.59	0.02	0.00	0.00	10,950	9.88	0.099	0.099	166.6	37.50	0.00	6.74	0.10
1	Septic 1	Well At #68	19.0	75.10	6.0	19.1	0.079	0.35	1.59	0.02	0.00	0.00	10,950	9.88	0.099	0.0099	166.6	37.50	0.00	9.56	0.01
1	Septic 1	Well At #68	19.0	75.10	6.0	19.1	0.079	0.35	1.59	0.02	0.00	0.00	10,950	9.88	0.099	0.00099	166.6	37.50	0.00	9.57	0.001
1	Septic 1	Well At #68	35.0	75.10	6.0	19.1	0.079	0.35	1.59	0.02	0.00	0.00	10,950	9.88	0.099	0.99	166.6	37.50	0.00	4.57	1.84
1	Septic 1	Well At #68	19.0	75.10	6.0	19.1	0.079	0.35	1.59	0.02	0.00	0.00	10,950	9.88	0.099	0.99	166.6	37.50	0.00	2.48	1.00
1	Septic 1	Well At #68	10.0	75.10	6.0	19.1	0.079	0.35	1.59	0.02	0.00	0.00	10,950	9.88	0.099	0.99	166.6	37.50	0.00	1.30	0.53