

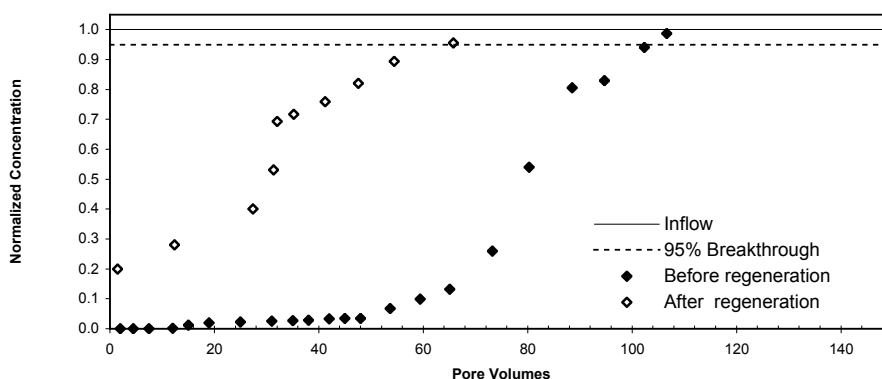
## Nitrate removal from water by TC-75

**Table 5.** Sorbent mass, porosity, flow rate, and residence time information for TC-75 sorbent column experiments.

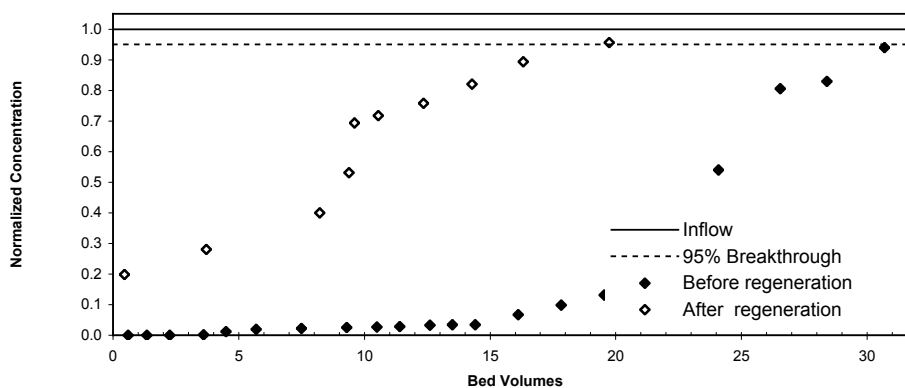
Sorbent	Mass Sorbent		Porosity	Flow Rate		Residence (min)
	(kg)	(lb)		(mL/min)	(gal/hr)	
TC-75	2.1	4.6	0.30	50	0.80	21

**Table 6.** 95% breakthrough for TC-75 sorbent materials given in pore volumes and minutes along with estimated mass of nitrate sorbed per mass of sorbent in mg/kg, lb/lb and percent basis.

Sorbent	Breakthrough			Mass sorbed		Mass Sorbed/Mass Sorbent		
	PV	BV	min	(mg)	(lb)	(mg/kg)	(lb/lb)	(% by sorbent)
Breakthrough before regeneration	103	31	2163	92080	0.2	43847	0.04	4.38
Breakthrough after regeneration	66	20	1368	46256	0.1	22027	0.02	2.20
<b>Total</b>	169	51	3531	138336	0.3	65874	0.07	6.58



**Figure 5.** Breakthrough curve of nitrate (in terms of pore volume) through TC-75



**Figure 6.** Breakthrough curve of nitrate (in terms of bed volume) through TC-75