

US EPA ARCHIVE DOCUMENT

Indicator Species



Surrogates

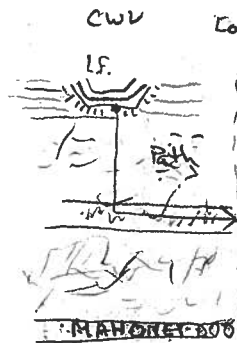
RF = Reduction Factor

- X L
- Soil Density
- Soil Layer
- Soil Thickness
- Porosity
- Diffusion
- Concentration
- Half-Life
- Geometry
- Sink removal
- Dispersion

Pick: Cl^-

Pick Concentration: 1ppm

Migrate
 $F(x, n)$



Pollute
 $G(x, n)$



Results

1-145 yrs, $C_x = 20$
 $RF = 0.123 \times 10^{-3}$

Reduction of Concentration of Surrogate (Cl^-)

"Pollute" Reduction Factor

Results

Table 31L-14
 $5.71 \times 10^{-15} @ 145y$

- Expected leachate Species Conc
- $C(K_1)$
- $C(K_2)$
- $C(K_3)$
- $C(K_4)$

R.F.
 $\otimes H$
 $C(K_n)$

- J_1
- J_2 Applicable Gw Qual. Std. Select worst case
- J_3
- J_4 → Ethylene dibromide
- J_5 @ $0.05 \mu g/L$

R.F.
 $\otimes H$
 $C(K_n)$

* = Ethylene Dibromide

$$Z = (RF) \times (C(K))$$

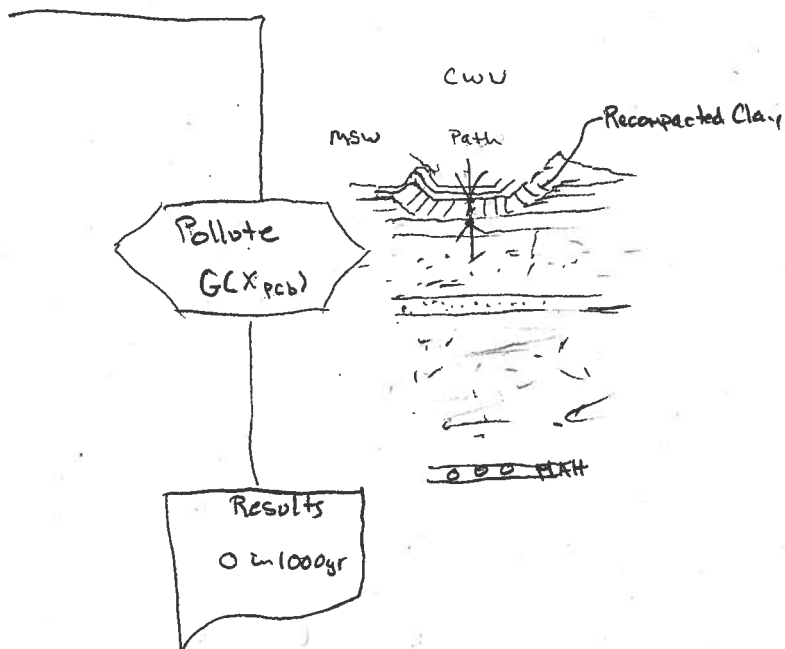
$$Z = (RF) \times (C(K))$$

No fail
 $[Z] < J_n$
 yes Pass

No fail
 $[Z] < J_n$
 yes Pass

Orig or to En. 749 122 457
 Starter cans 2 cans/day

$Z = 5.71 \times 10^{-15} \mu g/L$
 @ 100% (K)
 $K = EDB$ leachate ... 1ppm, 1000ppm ... 1×10^6



U.S. EPA Region 5		
Clinton L.F. #8, Iscah. +		
Groundwater Model use		
S.M. Johnson	2/25/09	2/2