Calculation of Porewater Concentrations

Porewater concentrations for PAHs, PCBs and pesticides were estimated based on the theory of Equilibrium Partitioning Theory (EqP) (DiToro *et al*., 1991):

$$C_{porewater} = C_{sediment} / f_{oc} * K_{oc}$$

where:

$C_{porewater}$ = concentration of the individual PAH, pesticide or PCB in porewater

$C_{sediment}$ = concentration of the individual PAH, pesticide or PCB in sediment (from Table 3-3)

f_{oc} = fraction organic carbon (f_{oc} = % total organic carbon (TOC) / 100)

K_{oc} = carbon/water partitioning coefficient log ($\log K_{oc} = 0.00028 + 0.983 * \log K_{ow}$)

Site-specific TOC (Table 4-3) and sediment concentrations for individual PAHs, pesticides or PCBs (Table 4-1) were used to calculate porewater estimates for each site. Log K_{oc} (*i.e.*, octanol-carbon partition coefficient) and log K_{ow} values (*i.e.*, octanol-water partition coefficient) for individual PAHs are presented in Table 2-5. Porewater calculations for each sampling station are presented in the attached table.