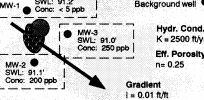
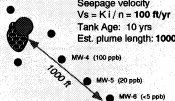
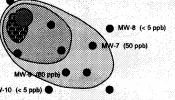
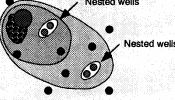
 <p>Underground storage tank</p> <p>Soil contamination: extends to depth of underlying saturated zone</p>	<p><b>Step 1: Source Delineation</b></p> <ul style="list-style-type: none"> <li>• Locate potential sources.</li> <li>• Define lateral and vertical extent of soil contamination.</li> <li>• Characterize contaminant properties: solubility, density, etc.</li> <li>• Select indicator parameters.</li> </ul>
 <p>MW-1 SWL: 91.2' Conc: &lt; 5 ppb</p> <p>MW-2 SWL: 91.1' Conc: 200 ppb</p> <p>MW-3 SWL: 91.0' Conc: 250 ppb</p> <p>MW-4 SWL: 91.0' Conc: 250 ppb</p> <p>Background well</p> <p>Hydr. Cond. <math>K = 2500 \text{ ft/yr}</math> Est. Porosity <math>n = 0.25</math> Gradient <math>i = 0.01 \text{ ft/ft}</math></p>	<p><b>Step 2: Detection Monitoring</b></p> <ul style="list-style-type: none"> <li>• Drill adjacent to source zone to define stratigraphy and identify uppermost water-bearing unit.</li> <li>• If DNAPLs are indicated, use drilling precautions or outside-in strategy for detection monitoring.</li> <li>• Install at least 3 wells to define ground water flow direction.</li> <li>• Compare indicator compound concentrations in upgradient and downgradient wells.</li> <li>• Run slug tests to define aquifer hydraulic properties.</li> </ul>
 <p>Seepage velocity <math>V_s = K i / n = 100 \text{ ft/yr}</math> Tank Age: 10 yrs Est. plume length: 1000 ft</p> <p>MW-4 (100 ppb)</p> <p>MW-5 (50 ppb)</p> <p>MW-6 (&lt; 5 ppb)</p>	<p><b>Step 3: Plume Length</b></p> <ul style="list-style-type: none"> <li>• Locate wells to define plume length.</li> <li>• Use gradient, porosity, and K to define seepage velocity (<math>V_s</math>).</li> <li>• Use <math>V_s</math> and estimated source age to estimate plume length.</li> <li>• Space downgradient wells accordingly.</li> <li>• Repeat as necessary to determine length.</li> </ul>
 <p>MW-8 (&lt; 5 ppb)</p> <p>MW-7 (50 ppb)</p> <p>MW-9 (20 ppb)</p> <p>MW-10 (&lt; 5 ppb)</p>	<p><b>Step 4: Plume Width</b></p> <ul style="list-style-type: none"> <li>• Locate wells on transverse line to determine plume width.</li> <li>• Can estimate width using advection/dispersion equation.</li> <li>• Unusual plume shapes indicate possible presence of NAPLs.</li> </ul>
 <p>Nested wells</p> <p>Nested wells</p>	<p><b>Step 5: Plume Thickness</b></p> <ul style="list-style-type: none"> <li>• Install nested wells to determine depth of contamination.</li> <li>• Estimate vertical gradient by comparing static water levels in deep and shallow nested wells.</li> <li>• Use drilling precautions if presence of DNAPL is indicated.</li> </ul>

CI61Q REMEDIACION