## Figure 1.3-7 Overview of Fate and Transport Mechanisms (Non-Carbonate Bedrock Setting) 3. NAPL TRANSPORT 4. AQUEOUS TRANSPORT **5. VAPOR TRANSPORT** 2. HYDROGEOLOGIC 1. GEOLOGY **6. FATE PROCESSES ZONES PROCESSES PROCESSES PROCESSES AEROBIC DEGRADATION** DIFFUSIVE LOSS OF VAPOR TO **ATMOSPHERIC &** PARTITIONING FROM SOIL Tank / Drum Storage **INFILTRATION INDOOR AIR** DNAPL ACCUMULATION VAPOR TO PORE WATER AND LATERAL SPREAD (REVERSIBLE) ALONG THE **SORPTION ONTO ORGANIC** RESIDUUM/BEDROCK CARBON FRACTION OF INTERFACE UNSATURATED FLOW OF Soil & Fill FORMATION SOLIDS **VAPOR DIFFUSION GRAVITATIONAL WATER** (REVERSIBLE) VADOSE **EVAPORATION FROM DNAPL** ZONE **DISSOLUTION FROM DNAPL** SORPTION RETARDED INTRAGRANULAR AQUEOUS Weathered Bedrock **VOLATILIZATION FROM THE DIFFUSION (REVERSIBLE)** RECHARGE AT WATER TABLE WATER TABLE SORPTION ONTO ORGANIC CARBON FRACTION OF LATERAL ADVECTION (FLOW) FORMATION SOLIDS SATURATED (REVERSIBLE) ZONE DNAPL SEEPAGE INTO FRACTURES AND SORPTION RETARDED **BEDDING PLANES** AQUEOUS DIFFUSION INTO RESIDUUM AND ROCK MATRIX **FRACTURED VERTICAL ADVECTION** (REVERSIBLE) **AQUIFER** TRANSFORMATION OF PARENT COMPOUNDS TO DAUGHTER **PRODUCTS** Competent Bedrock SORPTION RETARDED **INTRAGRANULAR AQUEOUS** DIFFUSION (REVERSIBLE)