

**EXAMPLES OF TREATMENT AMENDMENTS THAT CAN BE  
EMPLACED BY HYDRAULIC SOIL FRACTURING OR INJECTION**

<b>TREATMENT AMENDMENT</b>	<b>EXAMPLES</b>	<b>PROCESS</b>	<b>CONTAMINANTS</b>
Peroxides	Oxygen Release Compound ("ORC") e.g. calcium or magnesium peroxide Hydrogen Peroxide Sodium Percarbonate Sodium Persulphate	Biotic (aerobic) or abiotic (chemical oxidation)	Hydrocarbons
Permanganates	Potassium or sodium permanganate	abiotic - chemical oxidation	Chlorinated hydrocarbons
Polylactates	Hydrogen Release Compound ("HRC") Lactic acid ester	anaerobic - cometabolism; reductive dehalogenation	Chlorinated hydrocarbons
Polyglucosamines	Chitin	anaerobic - cometabolism; reductive dehalogenation	Chlorinated hydrocarbons
Enzyme/Microbe/Nutrients	Petrozymes	enhanced aerobic	Hydrocarbons
Dissolved Oxygen	Various	enhanced aerobic	Hydrocarbons
Zero Valent Iron	Solid or nanoscale iron particles	abiotic reductive dehalogenation	Chlorinated hydrocarbons and metals
ZVI & Cellulose	EHC	biotic and abiotic reductive dehalogenation	Chlorinated hydrocarbons and metals
Zeolites	Clinoptilolite	cation exchange, encapsulation	Salts, hydrocarbons, metals
Humates	Leonardite	adsorption, chelation, bio-stimulation	Salts, hydrocarbons, metals
Surfactants	various bio-surfactant	enhanced bioavailability	Residual and free phase product