

SEPR™

(Surfactant Enhanced Product Recovery)

DESCRIPTION

SEPR combines EthicalChem's patented, biodegradable, plant-based surfactant and co-solvent blends with low concentrations of hydrogen peroxide in an injection-and-extraction process to efficiently remove free-product and residual NAPL from the subsurface. EthicalChem proprietary surfactant blends desorb and reduce the viscosity of NAPL, enabling greater mobility toward recovery wells. Hydrogen peroxide decomposition simultaneously releases oxygen gas, causing the surfactant to foam up, creating bubbles which loosens NAPL, facilitating movement of the free product toward extraction points.

FEATURES/BENEFITS

- More efficient NAPL removal than conventional pumping approaches
- Greatly improves economics and performance of oxidant usage in subsequent chemical oxidation treatment, if required
- Uses biodegradable, plant-based surfactants
- Dosed at 0.5% to 2.5%, even to address heavy hydrocarbons
- Does not require addition of salt or other additives
- Process does not increase subsurface salinity

APPLICATIONS

- Removal of hydrophobic, heavy hydrocarbon NAPL, such as coal tar and creosote
- Reduction of free product to levels which can be addressed efficiently by oxidation
- Has been successfully implemented near sensitive receptors such as bodies of water

SEPR Field Results from a Creosote Site



Pre SEPR
No Product
Recovery;
Clear Samples

Day 1
Product +
Emulsion
Recovered

Day 2
Increased
Product
Recovery

Day 3
Product Flow

Frac Tank and Samples
Containing Extracted
Fluid from a Creosote

