

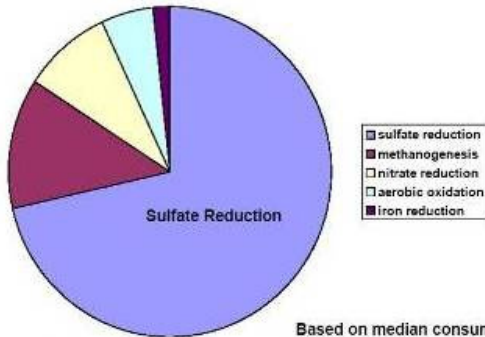


# YOUR NATURAL SOLUTIONS

## Patented Methods for *In Situ* Bioremediation

### Accelerated Site Cleanup Using Sulfate Enhanced Anaerobic Bioremediation Electron Acceptor Solution (EAS™) U.S. Patent No. 7,138,060

EOS Remediation has signed an exclusive patent license agreement, giving us exclusive rights to manufacture, use and sell a sulfate-enhanced technology for *in situ* remediation of contaminated groundwater. The patent includes a process for using high concentrations of sulfate to stimulate biodegradation of petroleum hydrocarbons (PHCs), aromatic hydrocarbons and other contaminants susceptible to sulfate-reducing bacteria. This sulfate-enhanced technology is marketed by EOS Remediation under the name EAS™.



Gasoline Release Sites

Based on median consumptions of electron acceptors at 74 sites

BP-EPA study

A recent British Petroleum/EPA study has concluded that most hydrocarbon plumes are anaerobic and depleted of sulfate. Other studies have drawn comparable conclusions. Anaerobic degradation is now firmly established and is considered to be the dominant driving force in natural attenuation of PHCs in the subsurface. This process occurs when terminal electron acceptor compounds such as nitrate, sulfate and iron react to reduce PHC concentrations.

EAS™ stimulates biodegradation by providing a soluble, readily available electron acceptor. In the presence of elevated sulfate, anaerobic groundwater bacteria use

the PHCs for carbon and energy while mineralizing the hydrocarbons to carbon dioxide and water. In addition, sulfate reduction consumes protons providing an added benefit of increasing site pH. The reaction results in complete degradation of the BTEX (Benzene, Ethylbenzene, Toluene and Xylenes) components. Ongoing project results indicate that the EAS™ technology can cost-effectively turn land once deemed unusable into productive real estate.

#### Why EAS™ Enhancement?

- EAS™ is a “Green Technology” that accelerates site cleanup. EAS™ enhances natural conditions and reduces carbon foot print when compared to conventional remediation – a socially responsible approach to remediation.
- EAS™ is an *in situ* remedial technique with minimal disruption to the site and surroundings. Injection can be accomplished via infiltration trenches, vertical wells, surficial spreading, former recovery wells, former SVE wells or temporary Geoprobe® points.
- EAS™ is cost effective in achieving client remediation goals. Most projects can be completed within 3-4 injections.
- EAS™ is safe to the environment and people.
- EAS™ is proven by case study results on over 200 sites.

