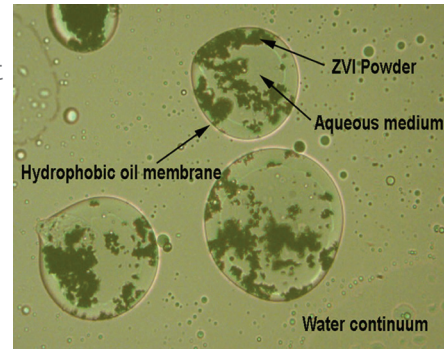


DNAPL Source Destruction

Source area or dense non-aqueous phase liquid (DNAPL) soil and groundwater contamination is a difficult challenge to environmental remediation engineers and scientists. RemQuest has addressed this challenge by licensing and commercializing the innovative in-situ DNAPL destruction technology termed emulsified zero valent iron (EZVI). EZVI is patented by the National Aeronautics and Space Administration (NASA). It consists of food grade vegetable oil, surfactant, elemental iron powder, and water; that are combined through a manufacturing process to create an inverse emulsification with a strongly hydrophobic physical chemistry. This hydrophobic physical chemistry matches the physical chemistry of DNAPL contamination and enables the EZVI to be fully miscible with source area contamination (in free phase or residual form). RemQuest has over 10 years of experience in manufacturing and implementing the EZVI technology, and is the leading supplier of this technology globally.



EZVI AWARDS:

- **2007 - Induction into the NASA's Space Technology Hall of Fame**
- **2006 - Excellence in Technology Transfer awarded by Federal Laboratory Consortium (FLC)**
- **2005 - Awarded Governmental Invention of the Year by NASA**
- **2005 - Awarded Commercialization Invention of the Year by NASA**

ADVANTAGES AND BENEFITS

- Provides *in-situ* source area destruction capabilities
- Fully compatible and synergistic with anaerobic *in-situ* bioremediation (ISB)
- Field tested by the U.S. EPA under the SITE Program
- Typical source area contaminant groundwater concentration decrease ~90+% within 3-6 months
- Effective in vadose soils
- Takes advantage of the physical chemistry of the contaminant and utilizes abiotic and biotic processes for contaminant destruction



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