

INTRODUCING

# BioSolve<sup>®</sup> Activator<sup>™</sup>

The newest member of the BioSolve family  
of dependable remediation products



**ACTIVATOR** provides engineers, regulators, consultants and contractors with a NEW high performance surfactant formulation that mobilizes and emulsifies NAPL for improved subsurface soil remediation.



**ACTIVATOR** is formulated to comply with EPA's new *Safer Choice* program, requiring BOTH competitive performance AND an improved health and environmental profile. This new BioSolve product is formulated with alcohol ethoxylates and other specialty chemicals, all of which have been designated "products of low concern" on EPA's Safer Chemical Ingredients List. As part of the final *Safer Choice* review, examiners consider factors such as toxicology, aquatic toxicity, biodegradability, physical safety as well as specific applications and concentration in use.

## TECHNICAL OBJECTIVES

**ACTIVATOR** was developed with three objectives:

1. Meet or exceed the remediation performance of BioSolve Pinkwater<sup>®</sup>;
2. Meet or exceed European REACH regulations on biodegradability; and,
3. Maintain end-user economics comparable to other BioSolve remediation products.

BioSolve Activator meets criteria for **ready biodegradability** as established by US EPA and European REACH regulations. A CO<sub>2</sub> Evolution test (OECD 301B), conducted by Aqua Survey (Flemington, NJ), determined that BioSolve Activator is over 90% degraded in less than 28 days.

## DEVELOPMENT

**ACTIVATOR** was four years in the making. Working with the same team of chemists who developed the original Pinkwater formulation, The BioSolve Company evaluated four generations of the new formulations before settling on **ACTIVATOR**.

Bench scale testing of product effectiveness began in 2012. Working with our technology partner at Tufts University, Dr. Andrew Ramsburg (Director of Tufts' Integrated Multiphase Environmental Systems Laboratory), we conducted numerous column tests with a variety of media and contaminants to demonstrate the effectiveness of **ACTIVATOR**. These column tests show that under laboratory conditions, **ACTIVATOR** outperforms Pinkwater in terms of both the rate of mass removal and total mass removal.

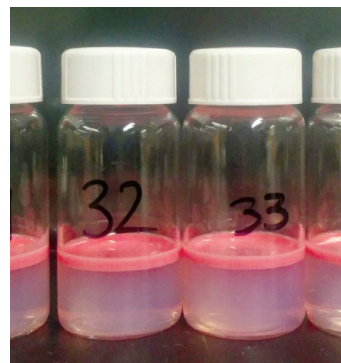
## COMMERCIALIZATION

Field trials of **ACTIVATOR** for in-situ soil remediation were initiated in 2014, with a focus on achieving efficient mass removal of NAPL. Based on the outstanding results of these trials, commercial sales of **ACTIVATOR** commenced in the summer of 2015 along with efforts to register the product under *Safer Choice*.

For an introductory period, **ACTIVATOR** will be sold at the same price as Pinkwater notwithstanding the higher cost of ingredients.



Activator test column showing mobilized NAPL (dyed red).  
*Courtesy of Tufts University*



Sample vials from Activator test column showing emulsion removed.  
*Courtesy of Tufts University*

**For additional information or to request a sample, please contact The BioSolve Company.**



329 Massachusetts Avenue, Lexington, Massachusetts 02420 USA  
Tel: +1 (781) 482-7900 | Fax: +1 (781) 482-7909  
info@biosolve.com | www.BioSolve.com