



August 1, 2020– Press Release

Terra Systems, Inc. is pleased to announce that it is now an authorized distributor of sodium and potassium persulfate from United Initiators, Inc. (UI) within the United States environmental remediation market. The combined resources of UI and Terra Systems bring together decades of both biological and chemical experience and expertise to the soil and groundwater remediation marketplace.

Terra Systems is an internationally recognized, environmental biotechnology company that is proactively expanding its product portfolio to include the activation of persulfates as part of our recommended comprehensive soil & groundwater “*Treatment Train Program*”. Our team of innovative scientists and engineers are seeing many complex sites utilizing both activated persulfate chemical oxidation and enhanced bioremediation in a treatment train approach to complete contaminated site remediation. We wanted to find persulfate activation methods that are safer and able to provide a shorter site recovery time frame than traditional activation methods, like sodium hydroxide. We have identified two uniquely different activation methods that provide a much safer work environment for the injection crew and significantly lower damage to injection equipment than the other traditional activation methods, while achieving significant project cost savings.

Terra Systems, Inc. (www.terrasystems.net) was founded in 1992 and holds the first United States Patent for the use of emulsified vegetable oil substrate, lactate and nutrients for the in-situ bioremediation of chlorinated solvents in groundwater (US Patent 6,398,960). Since then, using our core competencies in new product research and development, in-house manufacturing and unsurpassed pre and post sales technical support, Terra Systems has been continuously expanded our family of bioremediation products to offer our valued clients, state-of-the-art site remediation solutions.

This includes the successful development of our patented SRS[®] family of emulsified vegetable oil (EVO) products with large or small droplets, abiotic reductants for metals like hexavalent chromium, highly retained products with a stickier surfactant package for nitrate reduction in sandy aquifers and combinations of EVO and zero valent iron (SRS[®]-ZVI and SRS[®]-EZVI). We also provide our quick release QRS[™] family of sodium or potassium lactate substrates and our family of bioaugmentation cultures like TSI-DC[®] with >1 x 10¹¹/L *Dehalococcoides*; These innovative products can be utilized either as standalone solutions or within a comprehensive technology treatment train approach for today’s challenging aquifer conditions.

United Initiators (www.united-initiators.com) is the leading producer of persulfates globally with manufacturing locations in Europe and Asia. Activated persulfates have the highest oxidation potential of all the per-oxygen compounds, even higher than, for example, permanganates. UI offers a diversified portfolio of persulfates for all popular applications and tailored products for the requirements of highly specialized chemical process industries.



For further information, please contact Michael Free (mfree@terrasystems.net) or Dick Raymond (draymond@terrasystems.net), and for technical support including comprehensive treatment train soil & groundwater treatability study evaluations contact Michael Lee, PhD (mlee@terrasystems.net).