



November 4, 2003

TSX-V Trading Symbol: **WEE**

***NEWS RELEASE***

**PRESSURE PULSING TECHNOLOGY IMPROVES  
SURFACTANT PERFORMANCE IN THIRD PARTY BENCH SCALE STUDY**

Wavefront Energy and Environmental Services Inc. (the "Company") a provider of innovative technologies for fluid flow optimization and monitoring processes, is pleased to announce that it was contracted by Black and Veatch Special Projects Corp. (who was tasked by the United States Environmental Protection Agency, Waste Management Division) to assist with a bench-scale treatability study of surfactant-enhanced aquifer remediation for a dense non-aqueous phase liquid ("DNAPL") in a series of sand (Ottawa sand) packs sourced from a wood preserving site in North Carolina. The study consisted of eleven (11) bench scales at a third-party test facility in Austin, Texas where *Pressure Pulsing Technology* was employed to determine if it enhanced surfactant dispersion in the porous medium and thereby improving mobility of contaminant.

Black and Veatch are a leading global engineering, construction, and consulting company with more than ninety (90) offices worldwide, and Black and Veatch is ranked 78<sup>th</sup> on the Forbes Private Companies in the U.S. list for 2002.

The principal goal of the bench-scale treatability studies was to identify the optimal process to mobilize and recover trapped creosote (DNAPL) from contaminated soils, i.e. determine whether *Pressure Pulsing Technology* in conjunction with surfactant flooding could significantly improve creosote recovery.

The laboratory study indicated that *Pressure Pulsing Technology* significantly enhanced the performance of both waterflooding and surfactant flooding. *Pressure Pulsing Technology* improved the performance of waterflooding by approximately 15% in the Ottawa sand column experiment and approximately 10% in the Ottawa sand tank.

Surfactant flooding alone recovered 48% of the Creosote after approximately 5.5 pore volumes in Ottawa sand. When *Pressure Pulsing Technology* was employed, **99.7%** of the creosote was recovered. In the field soil experiments, a combination of surfactant flooding and *Pressure Pulsing Technology* recovered **99.8%** of the creosote for a starting saturation of 10.5% after 3.3 pore volumes of surfactant. When the creosote saturation was increased to 85%, 95.8% of the creosote was recovered after only 5 pore volumes of surfactant. In addition to creosote recovery, the combination of *Pressure Pulsing Technology* and surfactant flooding appears to effectively recover the various polyaromatic hydrocarbon contaminants.

A site remediation project using a *Pressure Pulsing Technology* waterflood/surfactant flood scenario has been discussed with Black and Veatch and the EPA. Management believes that PPT will expedite remedial processes, reducing long-term risks and obligations, and allowing for earlier exit strategies from contaminated sites.

Unit 104, 11430 – 168 Street  
Edmonton, Alberta,  
Canada T5M 3T9  
Tel (780) 486 2222  
Fax (780) 484 7177  
[www.onthewavefront.com](http://www.onthewavefront.com)



Wavefront is a service contractor that provides sound technical and environmentally responsible solutions to the challenges facing the environmental and petroleum sectors. Through implementation of innovative technologies, Wavefront provides a focused, bottom-line approach that enhances human health, the environment and protects our clients' investments.

For further information please contact:

Don Mosher, Investor Relations Officer                      or  
Phone: 604.682.5548  
Email: [donamosher@aol.com](mailto:donamosher@aol.com)

D. Brad Paterson, CFO  
Phone: 780.486.2222 ext. 224  
Email: [bradp@onthewavefront.com](mailto:bradp@onthewavefront.com)

[www.onthewavefront.com](http://www.onthewavefront.com)

ON BEHALF OF THE BOARD OF DIRECTORS

***WAVEFRONT ENERGY AND ENVIRONMENTAL SERVICES INC.***

*"D. Brad Paterson" (signed)*

D. Brad Paterson,  
Director & CFO