



**William O. Heath**  
*Chief Operating Officer*

## **EDUCATION**

B.S. Chemical Engineering, 1982. University of Washington, Seattle, WA

## **HISTORY**

1998-Present	Current Environmental Solutions, Richland, WA Chief Operating Officer
1982-2000	Battelle Memorial Institute (Pacific Northwest National Laboratory) Richland, WA, Senior Research Engineer

## **EXPERIENCE**

Mr. Heath is the Chief Operating Officer for Current Environmental Solutions (CES). With over 17 years of experience as a research & development engineer, Mr. Heath is recognized internationally as an expert in the development and commercialization of technologies for detoxifying organic wastes based upon electrical fields. Mr. Heath manages the technical and operations staff at CES, provides oversight of all Six-Phase Heating (SPH) remediation designs, and leads client development, sales and marketing.

As Chief Technology Officer for CES, Mr. Heath developed the CES laboratory capabilities used to evaluate treatability, electrical soil properties, and investigate thermally accelerated in situ contaminant degradation processes for our clients. He developed the Site Evaluation Test Instrument (SETI) that CES uses to establish electrical characterization data for remediation design and electrical grounding. He continues to advance the state of the art and fundamental understanding of the SPH technology and thermal treatment systems. He represents CES in the ad hoc Thermal Remediation Industry Group, maintaining relationships and collaboration with all major players in this new and growing field.

At Battelle, Mr. Heath was the principal inventor and developer of the SPH technology, more commonly referred to as Electric Resistance Heating (ERH), which started as small research project in 1989. This grew into a multi-million dollar, multidisciplinary R&D program that Bill managed, called ERACE (Electrical Remediation At Contaminated Environments). The program successfully developed and demonstrated four new technologies including SPH for treating organic contaminants in air, water, and soil. All four technologies were patented and are in varying stages of commercial development and deployment. Two of the four, the Gas-Phase Corona Reactor (GPCR) and SPH received the distinguished R&D Magazine Top 100 Award in 1993 and 1995, respectively as among "100 of the most technologically significant advances of the year".

Bill is an invited lecturer for the American Institute of Chemical Engineers and the American Nuclear Society, holds five U.S. patents, and has authored over 40 technical publications.

## **HONORS**

R&D 100 Award, naming the Gas Phase Corona Reactor as "one of the 100 most technologically significant advances" of 1993.

R&D 100 Award, naming Six-Phase Soil Heating as "one of the 100 most technologically significant advances" of 1995.

## SELECTED PATENTS

Heath, W.O., P.A. Gauglitz, G. Pillay, T.M. Bergsman, E.A. Eschbach, S.C. Goheen, R.L. Richardson, J.S. Roberts, and R. Schalla. 1996. Heating of Solid Earthen Material, Measuring Moisture and Resistivity. United States Patent 5,545,803.

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Heath, W.O., R.L. Richardson, and S.C. Goheen. 1994. Heating of Solid Earthen Material and Measuring Moisture and Soil Resistivity. United States Patent 5,330,291.

Heath, W.O., R.L. Richardson, and S.C. Goheen. 1993. Decontamination of Soil by Electric Heating. Foreign Patent WO 9309888 A1.

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Gauglitz, P.A., J.S. Roberts, T.M. Bergsman, S.M. Caley, W.O. Heath, M.C. Miller, R.W. Moss, R. Schalla, T.R. Jarosch, and C.A. Eddy-Dilek. 1994. Six-Phase Soil Heating Accelerates VOC Extraction from Clay Soil. PNL SA-24002. Presented at International Nuclear and Hazardous Waste Management Conference, August 14-18, Atlanta, Georgia.

Heath, W.O. and M.J. Truex. 1994. Enhanced In Situ Bioremediation Using Six-Phase Electrical Heating. Presented at In Situ Remediation: Scientific Basis for Current and Future Technologies, November 7-11, 1994, Pasco, Washington.

Gauglitz, P.A., J.S. Roberts, T.M. Bergsman, W.O. Heath, M.C. Miller, R.W. Moss, R. Schalla, and M.H. Schlender. 1994. Field Test of Six-Phase Soil Heating at the Savannah River Site. PNL SA-24002. Presented at In Situ Remediation: Scientific Basis for Current and Future Technologies, November 7-11, 1994, Pasco, Washington.

Bergsman, T.M., J.S. Roberts, D.L. Lessor, and W.O. Heath. 1993. Field Test of Six-Phase Soil Heating and Evaluation of Engineering Design Code. PNL-SA-21537. Presented at Waste Management '93, February 28-March 4, Tucson, Arizona.

Heath, W.O. 1993. ERACE (Electrical Remediation at Contaminated Environments). Presented at Environmental Restoration Technical Interchange Symposium, March 16-19, Salt Lake City, Utah.

Heath, W.O. 1993. "In Situ Heating to Destroy and Remove Organics from Soils" in Smith, L.A. And R.E. Hincbee, In Situ Thermal Technologies for Site Remediation, CRC Press, Boca Raton, Florida.

Bergsman, T.M., J.S. Roberts, W.O. Heath, and D.L. Lessor. 1993. Six-Phase Heating to Enhance Removal of Contaminants. Presented at Second Semi-Annual OTD Information Meeting, Houston, TX.

Heath, W.O., S.C. Goheen, M.C. Miller, and R.L. Richardson. 1992. "Investigation of Electric Fields For Low-Temperature Treatment of Soils and Liquids", Proceedings of the 1992 U.S. EPA/A&WMA International Symposium on In Situ Treatment of Contaminated Soil and Water, VIP-24. Air & Waste Management Association, Pittsburgh, Pennsylvania.

J.S. Roberts, T.M. Bergsman, D.L. Lessor, W.O. Heath. 1992. Field Test of Six-Phase Soil Heating and Evaluation of Engineering Design Code. Presentation at Technology Information Exchange, Fall 1992.

Heath, W.O., J.S. Roberts, D.L. Lessor, and T.M. Bergsman. 1992. Engineering Scaleup of Electrical Soil Heating for Soil Decontamination, DOE Spectrum'92.

Heath, W.O. 1990. In Situ Heating for Organic Waste Destruction. Presented at Department of Energy Thermal Treatment of Soil/In Situ Vitrification Workshop, August 8-9, Richland, Washington.

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Koegler, S.S., T.M. Brouns, W.O. Heath and R. J. Hicks. 1989. Biotenitrification of Hanford Groundwater and Process Effluents: FY 1988 Status Report. PNL-6917. Pacific Northwest Laboratory, Richland, Washington 99352.