

STEVEN J. FIGGINS
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EXPERTISE

Regulatory Negotiations	Soil and Groundwater Remediation
Program Management	Staff Development and Mentoring
Data Evaluation	Expert Support for Mediation Cases
Subsurface Investigations	Senior Technical Review

EDUCATION

M.B.A., Karl Eller Entrepreneurship Program, Minor in Marketing, University of Arizona, 1986
B.S., Electro-Magnetic Geophysics, University of Arizona, 1982

EXPERIENCE

Mr. Figgins is a senior program manager and geophysicist with more than 27 years of experience in conducting, scheduling, and managing both environmental and geophysical field surveys in diverse environments. He has been involved for 24 plus years in determining the most applicable methods and remediation approaches for various types of hydrogeological targets, as well as managing soil and groundwater remediation programs specifically designed for site closure. He has been involved in selecting remedial options for different sites, and he has worked closely with a variety of regulatory agencies to negotiate on client's behalf to present creative ideas that bolster their position to close their sites or accelerate site closure. He also has provided review of geophysical, hydrogeological, and remediation work plans, as well as data sets and final interpretations.

Mr. Figgins has worked with the Department of Toxic Substances Control (DTSC) and Regional Water Quality Control Board (RWQCB) to present new technical methods for evaluating the amount of volatile organic compounds (VOCs) that can effectively be desorbed and removed from soils and sediments. He has also provided workshops to the RWQCB on in-situ remediation methods and their applicability to metal and chlorinated solvent cleanup sites. In 2007 the Director of DTSC, Maureen Gorsen, requested Mr. Figgins to lead an effort to bring workshops on new remediation technologies to the DTSC project managers in offices across California. This effort was brought up during an Advisory Panel meeting, which Mr. Figgins is a member of.

Mr. Figgins has submitted the following abstract which has been accepted as a podium presentation for the Battelle Bioremediation conference in May 2009: **Using Dual Equilibrium Desorption Curves to Determine: How "Green" is your Remediation System or Approach?** Mr. Figgins is also a co-chair for the E6. session on Green Remediation Strategies at this conference as well.

Mr. Figgins has worked on a variety of investigation and remediation projects around the country. A brief summary of these projects includes the following techniques and site issues:

- Provided technical oversight and management to remediate nickel and chrome impacted soils at a site in Burbank. Applied soil fixation technology to fixate the metals and allow the soil to be used to fill the excavation once SPLP analysis showed metals were unleachable. The site has been closed.
- Developed conceptual approach for large drinking water plume containing a suite of CVOCs, perchlorate, 1,2,3-trichloropropane, and nitrate. Remediation costs and timeframes were estimated

using a variety of remediation methods and capture scenarios. Represented client in the plume with little VOC historical use.

- Provided oversight for insurance carrier onsite with TCE, 1,4 dioxane, MTBE, and hydrocarbon impacts in soils and groundwater, adjacent to a middle school. Negotiated successfully with both the RWQCB and the DTSC on the client's behalf to avoid unnecessary project regulatory oversight costs.
- Worked on a Jet Fuel site to field test a new Regenesis chemical oxidation product for efficacy at shallow depths to remediate Jet A. Where the oxidant contacted the Jet A remediation was effective; however, shallow depths created special injection issues. Closure has been applied for at the site.
- Provided remediation design for a perchloroethylene (PCE) impacted site using dual-phase extraction and injections of HRC. The injection locations were determined using the MIP method. The project is being currently considered for Monitored Natural Attenuation (MNA).
- Negotiated with RWQCB on a remedial action to demolish and clean up a former manufacturing facility with soil and groundwater impacts of hydrocarbons and VOCs, to redevelop into luxury condominiums. Site closure has been obtained.
- Provided expert support in a mediation case for a former circuit board etching facility with a chlorinated VOC plume beneath the facility. Provided presentations to the mediation judge, and provided technical support to the client and technical interface to the RWQCB case manager.
- Worked with project team on ozone/sparging approach for fast moving methyl tertiary butyl ether (MTBE) plume in shallow groundwater near a stream outfall.
- Project manager for phytoremediation approach used to control surface outbreaks of landfill leachate at a former castings plant landfill. This was one of the first phytoremediation projects to be conducted at a landfill in Michigan.

SELECTED PUBLICATIONS/PRESENTATIONS

Remediating Metal-Plating Impacted Soils with Bankrupt Owners (with Rick Roseman: Southern California Excavating and Environmental, Inc., and Alex LaPostal: RWQCB Los Angeles, California), Battelle's Remediation of Chlorinated and Recalcitrant Compounds Conference, Monterey, California May 2008.

Competitive Inhibition of TCE Degradation by Freons Present in a Regional Plume (with Dr. Robert Norris and Beata Goodrich), Battelle's Ninth In Situ and On-Site Bioremediation Conference, Baltimore, Maryland, May 2007.

Injection testing: the Missing Link for the Design of In-Situ Groundwater Remediation (with Jim Nguyen P.E.), Battelle's Ninth In Situ and On-Site Bioremediation Conference, Baltimore, Maryland, May 2007.

Unintended Consequences of Remediation Efforts (with Dr. Bob Norris & Dr. Jim Claffey), Battelle's Remediation of Chlorinated and Recalcitrant Compounds Conference, Monterey, California May 2006.

Phytoremediation: A Remediation Tool That Also Provides Emissions Credits for Facilities (with Dr. Adrian del Nevo), National DOE Conference, Long Beach, California, June 2000.

The Use of Electrical Geophysics to Detect Sources of Groundwater Contamination (with K. Zonge & L. Hughes), 55th Annual Society of Exploration Geophysicists Convention, Washington D.C., October 1985.

Applications of Two Electrical Geophysical Techniques in Mapping Ground Water Contamination (with L. Hughes, D. Emer, K. Zonge, R. Tinlin, H. Bentley), NWWA Surface and Borehole Geophysical Methods and Ground Water Instrumentation, Denver, Colorado, October 1986.