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University of California, Los Angeles
Public Health/Environmental Health Sciences
405 Hilgard Ave
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Los Angeles, CA 90095-1772
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Look for upcoming program announcements on our home page at
www.ph.ucla.edu/erc/ced.php

Environmental Strategies for the 21st Century & Beyond!

"Find It, Fix It, Sustain It!" Week

August 25-27, 2009

Environmental/Brownfields Site Management Fundamentals
Cutting Edge Soil & Groundwater Remediation Solutions
Proactive Beyond Compliance Sustainable Development

Tuesday
Wednesday
Thursday

Take 1, 2 or 3

Please pass this information along to interested colleagues.

Sustainable

Environment
Communities
Workplaces

Environmental Strategies for the 21st Century & Beyond!

"Find It, Fix It, SUSTAIN IT!" Week

Tuesday, August 25, 2009
Environmental/Brownfields Site Management Fundamentals

Wednesday, August 26, 2009
Cutting Edge Soil & Groundwater Remediation Solutions

Thursday, August 27, 2009
Proactive Beyond Compliance Sustainable Development

Location: UCLA

UCLA
UCIrvine
Southern California Education and Research Center
Continuing Education/Outreach

The Southern California Education and Research Center is a NIOSH ERC

UCLA Southern California Education and Research Center

UCIrvine *Continuing Education/Outreach*

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Location: UCLA

A map, driving and parking instructions will be sent to you prior to the class.

Course Details Online

http://www.ph.ucla.edu/erc/sustain-it-week-08.09.php

Registration Fee

(Health and safety professionals employed by state or local government may be eligible for a $100 per day stipend.)

Standard Fee

- $349 per class
- $895 for all three

Early bird (before 7/25/09)

- $299 per class
- $795 for all three

Fee includes course manual, refreshments, parking*

Paying by credit card: All major credit cards accepted. Complete credit card information online, on registration form or call 310/206-2304.

Paying by check: Payable to **University of California Regents**

Phone registration: Call 310/206-2304.

Online registration: **www.ph.ucla.edu/erc/register.php.**

Fax registration: Call 310/794-9317. Please send your original registration form with payment under separate cover.

***Parking is only free if instructions are followed.**

Accreditation

- ABIH— For each course, 1.0 Certification of Maintenance Points per day from the American Board of Industrial Hygiene have been approved or applied for.
- BCSP and Continuing Education Units — Eligible for .75 Continuation of Certification Points/CEUs for each course per day.

Distinguished Workshop Instructors

Richard T. Cartwright, PE, CHMM*, CPIM* – Course Director Senior Vice President MEC^{x}, LP (Sustainable Development Workshop Facilitator, Past National President AHMP, National CHMM Course Trainer)

Isaac Aboulafia, PE, LEED AP Candidate, Senior Vice President, Chief Environmental Engineer, MEC^{x}, LP (Sustainable Development Contributor in North & South America, Chemical Oxidation/Stabilization Remediation Technology Expert)

Nick Bauer, CHMM, Principal Scientist, Excalibur, Inc. (Environmental Management and Sustainable Development Expert)

David Billo, LSP, LEED AP Candidate, Senior Project Manager, BETA Group (Brownfields Remediation and Sustainable Development Expert)

Greg Davis, President/CEO Microbial Insights, Inc. (Microbiology Expert)

Patrick Hicks, PhD, Vice President, Wavefront Energy & Environmental Services (Remediation and Site Characterization Expert)

Robbie Laird, P.Eng, Principal Engineer, C3 Environmental Limited (Waterloo Barrier® Expert)

Craig Nicholson, LSP, LEED AP, Senior Project Manager, Senior Project Manager, Ajax Partners (Sustainable Development Expert)

Robert Pirkle, PhD, President/CEO Microseeps, Inc. (Chemistry, Microbiology and Monitored Natural Attenuation Remediation Technology Expert)

Richard Raymond, Jr., President/CEO TerraSystems, Inc. Sustainable Development Contributor in Europe, Asia, North America and South America; Member of Sustainable Remediation Forum (SURF); and Member of Source Area Bioremediation Research project (SABRE)

Eric Roberts PE, PG, Principal Scientist, Excalibur Inc. (Remediation Systems Expert)

John Sohl, President/CEO Columbia Technologies, Inc. (Site Characterization Expert)

Elizabeth Wessling, Vice President, Chief Chemist, MEC^{x}, LP (Chemistry Data Validation Expert)

Lodging

UCLA Tiverton House, 900 Tiverton Avenue, Los Angeles, CA 90024-3013. Reservations: 310/794-0151, http://www.tivertonhouse.ucla.edu/index.html Reservations are to be made directly with the Tiverton House.

UCLA Guest House — conveniently located on campus and adjacent to campus shuttles. Telephone: 310/825-2923. Reservations are to be made directly with the Guest House.

A list of additional hotels near campus will be sent upon request.

Reasons to Attend

***Lifelong Learning Professional Experience** – This continuing education workshop will be taught by Chief Executive Officers, Corporate Presidents, Senior Environmental Consultants, Professional Engineers and LEED Accredited Professionals. Continuing education units are potentially applicable for CIH, CSP, CHMM certification maintenance points and PE license professional development hours.*

***Revolutionary Interdisciplinary Workshop** – University courses are typically taught within individual (separate) vertical subject matter disciplines (silos) such as geology, chemistry, engineering, sociology, and political science. The integrated subject matter for this workshop will be taught within a matrix of both horizontal and vertical disciplines. While several distinguished workshop presenters have advanced graduate degrees, they were selected to participate based upon a revolutionary criteria of internationally recognized practitioner contributions and a proven track record of pedagogical motivational platform presentation skills. Workshop presenters have contributed to sustainable environmental development solutions in Asia, Australia, Europe, North America, and South America.*

***Innovative Site Characterization** – Learn about the new available state of the art site investigation and assessment techniques. Site characterization has been around for several decades. Unfortunately, in too many cases the site characterization information currently available is sub-standard and inadequate for pay for remediation performance evaluation.*

***There is No Remediation "Silver Bullet"** – There is no single technology that can cost-effectively solve remediation problems at every single site. Remediation sites are typically heterogeneous not homogeneous. Some technologies are better used in the contaminant source and others are better utilized within the contaminant plume. Similar to wastewater treatment, a treatment train of multiple treatment technologies can be beneficial. Sometimes, the "Record of Decision" (ROD) regarding which applicable treatment technology to use is out dated (decisions were based upon technology that was only available in the last century). Based upon new sustainable development criteria, it can be appropriate to break the "Record of Decision" and replace it with a sustainable technology solution.*

***What is the benefit of going beyond environmental compliance?** – Learn how to justify an Environmental Management System that goes beyond environmental compliance. What are the sustainable development metrics? What are the future professional career options within sustainable environmental management?*

SUSTAIN IT! Week Overview

A revolutionary interdisciplinary three-day workshop has been developed that offers a unique opportunity to learn both the theory and practice of sustainable environmental management. An interactive "hands-on" case history practitioner training approach will be utilized to cover the engineering, scientific, legal, political, and ethical dimensions of environmental sustainability. An internationally recognized team of chief executive officers, senior environmental consultants, professional engineers, and LEED accredited professionals will lead participants through the body of knowledge needed to practice in the 21st century and beyond as sustainable environmental development program managers.

Who Should Attend

Senior management executives, environmental consultants, governmental agency regulators, not for profit environmental decision makers, professional engineers, environmental project managers and technical staff.

Tuesday, August 25, 2009

Environmental/Brownfields Site Management Fundamentals

Overview Sustainable development includes the proper use of limited resources to meet current human needs while preserving the environment so that these needs can be met not only in the present, but also in the indefinite future. A rigorous analysis of scientific, legal, political and ethical issues will be conducted. Definitions and trade-offs between Brownfields and Greenfields development will be discussed. Innovative geo-chemical and geo-physical site investigation tools are now available to optimize the selective application of targeted remedial remedies in contaminant source areas. Principles of chemistry data validation will be reviewed.

Learning Objectives—Upon completion of Day 1, the participant should be able to:

- Describe the relevant issues pertaining to sustainable development.
- Explain the cost/benefit trade-offs between Brownfields & Greenfields sites.
- Identify state-of-the art site investigation and assessment tools.
- Determine how clean is clean? Which questions to ask and not ask?
- Understand the need for a site information management plan and how chemistry data validation is achieved.

Topics

- Why is an interdisciplinary approach required to properly evaluate sustainable development criteria?
- Scientific, legal, political, and ethical sustainable development issues
- Brownfields versus Greenfields site development
- Innovative geo-chemical and geo-physical site characterization tools
- Site cleanup standards (maximum contaminant level or risk-based standard)
- Fundamentals of chemistry data validation

Wednesday, August 26, 2009

Cutting Edge Soil & Groundwater Remediation Solutions

Overview For decades, environmental decision makers have evaluated site remediation projects solely by determining how much contaminant can be removed from soil and groundwater in the shortest possible time. Given what we now know about energy scarcity and global warming, it makes little sense, environmentally or economically, to emit tons of greenhouse gases into the air in order to remove pounds of contaminants from soil and water. Too many remediation projects essentially trade one form of pollution for another. This costs a lot of money, burns a lot of fuel, and does not result in a net environmental benefit. In the past, valuable remediation resources have been squandered hauling contaminated soil and debris from hazardous waste sites to landfills that have also become "Superfund" sites.

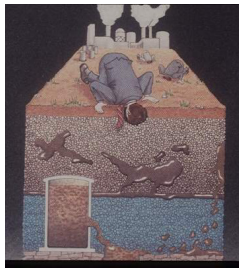
Sustainable remediation incorporates a judicious evaluation of limited resources when selecting and implementing remedies to maximize the net environmental, societal, and economic benefits of a cleanup action. The question today is how to include sustainability principles and practices into remedial decision making, remedy optimization, and remedy changes.

Learning Objectives—Upon completion of Day 2, the participant should be able to:

- Compare advantages/disadvantages of on-site versus off-site remedial solutions
- Identify cutting edge in-situ and ex-situ remediation solutions.
- Evaluate remedial pros and cons for the following technologies:
  - Biological treatment
  - Chemical oxidation/reduction
  - Thermal treatment
  - Stabilization/containment
- Describe benefits of an overall remediation treatment training approach

Topics

- Trade-off between on-site versus off-site treatment & disposal
- When to use in-situ versus ex-situ remediation
- Green remediation technology solutions (EPA Guidance)
- Biological, chemical, and thermal treatment technologies
- Contaminant stabilization and containment technologies
- Combination of multiple treatment technologies



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Phone: 310/206-2304 **E-mail:** erc@ph.ucla.edu
http://www.ph.ucla.edu/erc/ced.php

Thursday, August 27, 2009

Proactive Beyond Compliance Sustainable Development

Overview "Command and control" compliance regulations were popular in the early stages of U.S. environmental regulation in the 1970's. They were based on engineering approaches to specific pollution sources, such as those designated as significant by the Clean Air Act and the Clean Water Act. "Command and control" compliance regulations focus on preventing environmental problems by specifying how a company will manage a pollution-generating process. This approach generally relies on detailed regulations followed up by an ongoing inspection program.

"Performance oriented" regulation is an alternative whereby specific environmental performance goals, such as a reduction in the pollution associated with a process, is specified by the regulation and each facility determines the best method to achieve this goal. The concern with this approach is that it tends to be much more difficult to enforce because it requires an intimate understanding of the process and alternatives to the process. In general, the "performance oriented" approach requires the documentation of these and the environmental impacts associated with the process in a planning document, which can be reviewed by regulatory authorities. Proactive beyond compliance Sustainable Environmental Management Systems can form the basis for the format of such a plan.

Learning Objectives—Upon completion of Day 3, the participant should be able to:

- Recognize the need to go beyond minimal compliance.
- Understand the global climate challenge that we currently face.
- Calculate one's carbon footprint/natural resource depletion.
- Identify specific courses of action to reduce your carbon footprint.
- Evaluate an Environmental Management System based upon identification of sustainable development credits.

Topics

- "Command & Control" Compliance
- "Performance Oriented" Compliance
- Introduction to Environmental Management Systems
- Benefits of going beyond compliance
- Global climate change
- Carbon footprint calculation/natural resource depletion
- Carbon Offset Programs
- Leadership in Energy & Environmental Design
- Environmental/Sustainable Development Certification Programs
  - Energy Star (Buildings)
  - DFE - Design for the Environment (EPA)
  - EnvironmentalChoice/Ecologo
  - EU Ecolabel
  - Energy Star
  - GreenGuard
  - Green Seal
- Sustainable Urban Design
- Calculating Financial Incentives/Sustainable Development Metrics
- Convincing Upper Management and/or Your Clients
- Down the Road – Future of Sustainable Environmental Management

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Registration Form

Name:_____

Title: _____ Department: _____

Company/Agency: _____

Address _____City: _____State: _____ Zip: _____

Daytime phone: _____ Fax #: _____ Cell #: _____

E-mail: _____

_____ Environmental/Brownfields Site Management Fundamentals _____ Cutting Edge Soil & Groundwater Remediation Solutions
_____ Proactive Beyond Compliance Sustainable Development

Payment Amt $_____ Method of Payment: ___Check ___ Credit Card

Type of Credit Card: _____ Name as it appears on card: _____

Credit Card Number: _____ Exp. Date _____

Billing Address: _____

Signature: _____

Profession: ____ Physician ____Ind. Hygienist ____ Nurse ____ Safety or Other: _____

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