



Topic: Vapor Intrusion: Below-Slab Protection Methodologies

Speaker: Page Cotton, Stego Industries, CES Facilitators

Time: Tuesday, December 11, 11:30am-1pm

CEMS will not be applying for a CLE for this presentation

For brownfields and contaminated sites, the focus has historically been to protect human health by preventing exposure to direct contact of contaminated soil or drinking contaminated water. We now know that inhaling chemical vapors poses a potential risk to the health of residents, workers, and other occupants who are inside of the buildings. Vapor intrusion is an evolving science and it presents challenges to redeveloping these sites.

This educational and technical seminar provides an in-depth look at below-slab vapor intrusion protection and how it can be a sustainable tool to control transmission of VOCs into the built environment. CEMS attendees will gain a better understanding of the different means and methods available for protection of vapor intrusion below buildings. It will discuss the evolution of geomembranes and advancements in barrier film extrusion and engineering specifically as it relates to VOCs associated with contaminated sites. The presentation will also walkthrough the science behind vapor migration below and through concrete slabs, and how an understanding of the geomembrane's permeation characteristics can assist in design of the mitigation system. In addition, attendees will learn what design, construction, and installation considerations can be employed to ensure success.

Page Cotton is a Stego Industries CES facilitator. She has been trained on CES guidelines and is highly knowledgeable in the field of below-slab vapor protection. She is continually learning the latest theory for design and implementation of overall below-slab vapor protection systems. In addition, Ms. Cotton is a member of the Construction Specifications Institute (CSI) and is a Certified Construction Product Representative (CCPR).

For complete topic information, a full biography, and reservations, please follow this link: [CEMS December Luncheon](#)

LOCATION: The EPA Conference Center located on the 2nd floor of the EPA Region 8 Headquarters building at 1595 Wynkoop St. When entering the building, visitors will be asked by the building security guards to display valid photo identification, pass through airport type security machines, sign in at the lower front desk, and wear a temporary EPA visitor badge. Then please proceed to the second floor to register with the CEMS representative.

MEETING FORMAT: Members may either bring their own lunch and attend the meeting for no charge, or they may request that CEMS order a box lunch for them. The cost of the box lunch for members is \$16.00; for non-members, \$19.00.

RESERVATIONS: PLEASE give your name, company name and phone number via email to admin@coems.org. PLEASE INDICATE IF YOU ARE RESERVING A BOX LUNCH OR BRINGING YOUR OWN. Reservations must be received BEFORE Friday, December 7, 2018 at 5:00PM. No reservations will be taken after this date! Payment of \$16.00 for members, \$19.00 for non-members will be accepted at the door with prior reservation. Please cancel your reservation by Friday, December 7, 2018 if you are unable to attend. It is the policy of the Society to bill for meals reserved but unclaimed. You may also pay with credit card via PAYPAL by following this link: [CEMS December Luncheon](#)

Notice: CEMS would like to thank EPA for the use of meeting space and would like to emphasize that the use of EPA space does not constitute endorsement of CEMS, sponsors of CEMS functions, or the content of CEMS workshops or meetings.

From the Board... The Obligatory End-of-Year Recap Column by Dave Lipson, HRS Water Consultants, Inc.

Season's Greetings from the CEMS board! Here we are with another year gone, another time for torch-passing, another moment to reflect on the past, another opportunity to gaze into the tea leaves of the future. Just when you take down last season's holiday decorations it's time to start setting them up again. I'm reminded of lyrics from one of my favorite bands: "Every year is getting shorter, never seem to find the time. Plans that either come to naught or half a page of scribbled lines."

Fortunately, CEMS' plans for 2018 came to fruition, thanks to the many volunteers who generously donated their time planning, coordinating, and executing CEMS' wonderful events. We had the spring social movie event in April, which was well-attended and lively. Thankfully, no one was hurt. The July golf tournament at Rolling Hills Country Club sold out and was a huge success. The weather was perfect, and the day was very rewarding. Look forward to repeating at Rolling Hills in 2019. And the fall conference in October was excellent. Though not sold out there were plenty of attendees, the technical content was top-notch, and there were lots of sponsors and networking. In 2019 let's try to sell out the fall conference.

An additional initiative CEMS took on in 2018 was generating cross-connections with other professional organizations. There is a broader environmental management community in Colorado that CEMS needs to connect with. For example, at the beginning of the year we created a new liaison position that will allow us to reach more people in the Colorado Division of Oil and Public Safety (OPS). We also signed a Partner Organization Agreement with the Colorado Oil and Gas Association (COGA) that provides for cross-promotion of networking events. Next year CEMS should take advantage of these connections and look for new cross-connections with agencies (COGCC?) and professionals in the mining, agricultural, and recreational communities.

A personal initiative I took on in 2018 was giving more public recognition to CEMS' board members and volunteers because they donate their time for free and they deserve thanks. CEMS should give formal public recognition to outstanding volunteers in the form of annual Service Awards.

Many thanks to Dr. Steve Brauner of Integral Consulting, Inc. for stepping up to be CEMS' Incoming President for 2019. I've gotten to know Steve over the past couple years through CEMS. He's a great guy, a solid leader, and perfect for the job. Please be sure to give him your support in 2019.

I'd also like to thank Mr. Brad Coleman, P.E., of Burns & McDonnell, who is CEMS' outgoing Past President. Brad just sets a great example of leadership and I'm lucky to have followed in his CEMS footsteps.

(Continued on Page 6)

2018 CEMS Officers:

President: David Lipson, PhD, PG, HRS Water Consultants, Inc., (303)462-1111 Ext. 306, dlipson@HRSWater.com

Vice-President:

Steve Brauner, PhD, PE, Integral Consulting Inc., (720)465-3352, sbrauner@integral-corp.com

Secretary: Noreen Okubo, (303)312-6646, noreen.okubo@gmail.com

Treasurer: John Fontana, Vista GeoScience, (303)277-1694, jfontana@vistageoscience.com

Past President: Brad Coleman, Burns & McDonnell Engineering Co., Inc., (303)362-2335, bacoleman@burnsmcd.com

CDPHE Liaison: Fonda Apostolopoulos, CDPHE, (303)692-3411, fonda.apostolopoulos@state.co.us

US EPA Liaison:

Board Members:

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Joe Dischinger, Fairfield and Woods, P.C., (303)894-4404, jdischinger@fwlaw.com

Maggie Mandell, PE, Versar, (301)943-2830, maggiemandell@gmail.com

Erik Gessert, PE, Terracon Consultants, Inc. (303)454-5277, erik.gessert@terracon.com

Andy Horn, Westwater Hydrology LLC, (303)456-1981, Andy@WestwaterHydro.com

Brian LaFlamme, Nationwide Environmental Services, Inc., (303)232-2134, blaflamme@nationwideenv.com

Committee Chairpersons:

Monthly Programs:

Andy Horn, Westwater Hydrology LLC, (303)456-1981, Andy@WestwaterHydro.com

Spring Movie Event:

Monica Genadio, Environmental Science Partners, LLC, (720)936-1694, mgenadio@gmail.com

Fall Conference:

Erik Gessert, PE, Terracon Consultants, Inc. (303)454-5277, erik.gessert@terracon.com

Golf:

Mike Jahn, Tasman Geosciences, Inc., (303)487-1228, mjahn@tasman-geo.com

Scholarship – Co-Chairs:

Fonda Apostolopoulos, CDPHE, (303)692-3411, fonda.apostolopoulos@state.co.us

Bruce Marshall, Marshall Environmental Solutions, LLC, Inc. (720)708-8329, bruce@marshallh2o.com

Membership: David Lipson, PhD, PG, HRS Water Consultants, Inc., (303)462-1111 Ext. 306, dlipson@HRSWater.com

Website: Juliana Reid, CEMS, admin@coems.org

Products and Services



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for pricing details.

For information on listing products and services in the CEMS newsletter, please contact CEMS at (303)674-9752 or admin@coems.org.

Presentation Opportunities for Upcoming CEMS Meetings

The CEMS Program Committee is currently searching for "interesting, topical and informative" presentations for our meetings in 2018 and beyond. This is a great opportunity to network with your peers, share information and technology, and become more involved with the environmental community. CEMS is interested in an assortment and variety of topics relevant to environmental and natural resources professionals. Each monthly presentation is roughly 50 minutes, followed by a question and answer period.

If you or someone you know is interested in presenting at our monthly meetings, or our annual conference, please feel free to contact our Programs Committee, Andy Horn at Andy@WestwaterHydro.com or Steve Truesdale at struesdale@ninyoandmoore.com.

Comments or suggestions from previous meetings, including the Annual Fall Conference, are also welcome. Let us know if we can publish them in the newsletter or website.

Looking for a New Position

CEMS posts many job opportunities on our website.

<http://www.coems.org/jobs>

If you or your company would like to post to our website, please just send over the job description, with contact information to admin@coems.org.

We also will post resumes for our members to help you find new opportunities.

RECRUIT AND PROFIT!!

Recruit a **NEW** member for CEMS and get a **box lunch** credit voucher! For each person or organization you persuade to join CEMS, you will be issued a **box lunch** voucher that you can apply to the CEMS fee of your choice, whether it be a luncheon, workshop or your own membership renewal. Note that you cannot take credit for a member's renewal. However, there is **NO LIMIT** to the number of vouchers you can accumulate. Just have the new member put your name on the referral portion of the Membership Application Form. And keep those new members coming!

CEMS Meeting Sponsorships

Sponsors for a CEMS lunch meeting are provided a table where brochures or other materials can be displayed. The cost to sponsor a CEMS meeting is \$30 for members and \$85 for non-members. The non-member rate includes a one-year CEMS individual membership. Please send your request to sponsor a lunch meeting to admin@coems.org.

CEMS REGULATORY UPDATE
FEDERAL AND STATE ACTIONS IMPACTING COLORADO

By Amanda L. Hemmerich
Burns, Figa & Will, P.C.
November 2018

On October 9, 2018, the Water Quality Control Commission (the “Commission”) under the CDPHE amended Regulation 84—Reclaimed Domestic Wastewater Control Regulation to approve of reclaimed water for fixture flushing in multi-family and non-residential structures. Both the Colorado General Assembly (under HB 18-1069) and Denver Water (through a regulatory proposal) sought to add toilet and urinal flushing as uses for reclaimed domestic wastewater, leading the Commission to hold rulemaking hearings starting on August 6, 2018. After rulemaking hearings, the Commission approved amendments to Regulation 84 to add fixture flushing as a use for reclaimed domestic wastewater. To minimize risk of exposure to reclaimed water from unintended cross-connections with potable water plumbing, the Commission additionally adopted disinfection requirements and cross-connection control requirements. The amendments to Regulation 84 become effective on November 30, 2018, and can be found here:

https://www.colorado.gov/pacific/sites/default/files/84_2018%2811%29.pdf.

On October 10, 2018, the Air Quality Control Commission under the CDPHE adopted revisions to Regulation Number 3, Part A to increase air pollutant emission notice filing fees, permit processing fees, and annual emission fees. Specifically, this revision increased fees paid by certain stationary sources of air pollutants in order to prioritize the use of revenues generated by the fee increases to reduce permit processing times. Concurrent with these revisions, the Air Pollution Control Division (“Division”) has convened a stakeholder group consisting of affected industries to: (1) identify and assess measures to improve billing practices and increase accounting transparency with respect to application processing fees and (2) assess potential efficiency improvements, including associated metrics to measure the Division’s performance, with respect to Division activities financed by the stationary sources control fund. The caps set by this regulation will automatically increase by the rate of inflation on each January 1 from 2019 to 2028, but the actual fees collected will be set at or below the statutory cap by the Commission. The revised regulations can be found here in Part A, Section VI: https://www.colorado.gov/pacific/sites/default/files/5-CCR-1001-5_0.pdf, and the legislation can be found here: <https://leg.colorado.gov/bills/hb18-1400>.

On October 10, 2018, the U.S. Environmental Protection Agency (EPA) issued a direct final rule promulgating significant new use rules (SNURs) under the Toxic Substances Control Act (TSCA) for 28 chemical substances that were the subject of premanufacture notices (PMNs). EPA notes that the chemical substances are subject to consent orders issued by EPA pursuant to TSCA Section 5(e). The direct rule requires persons who intend to manufacture (defined by statute to include import) or process any of these 28 chemical substances for an activity that is designated as a significant new use under this rule to notify EPA at least 90 days before commencing that activity. The required notification initiates EPA’s evaluation of the intended use within the applicable review period. Persons may not commence manufacture or processing for the significant new use until EPA has conducted a review of the notice, made an appropriate determination on the notice, and has taken such actions as are required with that determination. This rule will be effective on December 10, 2018 and can be found here: <https://www.regulations.gov/document?D=EPA-HQ-OPPT-2018-0649-0090>.

MEMBERSHIP – RENEWALS AND NEW MEMBERS

A big thank you to all those members who renewed, and welcome to our newest members.

Renew – Individual

Nick Butel, Aquionix, Inc.
 Cindy Fischer, Waste Control Specialists
 Tim Mower, Tetra Tech EM Inc.
 Britt M. Phillips, Arcadis North America
 Brian G. Hansen, Formation Environmental, LLC
 Laura Newman, Geo-Solutions, Inc.

New – Individual

Angelica McMahon, City of Westminster

Renew – Corporate

AECOM

Katie Abbott	Nathaniel Adams	Christopher Ahrendt	Anne Baldrige	Annette Barndt
William Bock	Larry Brook	Eric Bunnell	Jim Burrell	Joe Capotrio
Cory Chance	Patrick Clem	Noelle Cochran	Ray Cote	Rollin Daggett
Thomas Damiana	Jeffrey Dawson	Robert DeBaca	Linsey DeBell	Vincent DeCianne
Scott Ellis	Anne Ferguson	Tom Fiersten	Sheri Fling	James Ford
Anthony Galligan	Molly Giere	Dan Gregory	Xiaoniu Guo	Naseem Hasan
Denise Hazelman	Justin Henry	Richard Henry	Amal Hijazi	Jeremy Hurshman
Robert Iwanchuk	Meagan Jones	Julie Kafcas	Vasanta Kalluri	Brian Kennedy
Bill Killam	James Knight	Mark Levorsen	Camille Littlefield	Jim Litz
Patricia Lorenz	Paul Lorenz	Chuck Luyten	Karen Maestas	Gary Maher
Jon Mallonee	Wes Martin	Allison Martinelli	Diane McCarty	Douglas Mendelson
Ali Molthen	Emily Nebel	Katherine Nicholas	Dwight Parks	Sameer Patel
Chris Pearson	Ken Pinnella	Brian Powers	Dustin Rapp	Elaine Reilly
Brian Rothmeyer	Cindy Sammauro	Tiffany Samuelson	Brittany Shaw	Caitlin Shaw
Kaye Sigmon	Jason Smith	Kallin Snow	Gregg Somermeyer	Matt Spansky
Mary Stauffer	Steve Szocik	Kelly Tapp	Gordon Tucker	Geoff Webb
Emily West	Caroline Whitesides	Aaron Wilson	Margaret Zebley	Chuan-Mian Zhang
Meegan Zimmerman				

ATC Group Services LLC

Todd Anderson	Rudy Arrieta	Michelle Carlin	Jake Conver	Michael Ellerd
Andrew Flynn	Kevin Giltinan	Robert Hammer	David Kilburn	Robert Lewis
Jeff Lomme	Vanessa Rosario Lopez	Melanie Lutz	Shilo Pare	Jack Riggi
Marta Schlecht	Jennifer Tomas	Eric Vonde	McKenzie Wenger	Kari Yenter

BELFOR Environmental

Mike Campton	Mark Churchill	Kevin Cope	Matt Hourigan	Frank Johnston
Brenda Lenz	Marvin Sasser	Chuck Williams		

Davis Graham & Stubbs LLP

Joel Benson	Andrea Bronson	Stacie Carter	Adam S. Cohen	Greg Danielson
Randy Dann	William J. Duffy	Mike Gallagher	Mave Gasaway	Laura Gill
Randy Hubbard	John Jacus	Tom Johnson	Shayln Kettering	Gene Lang
Lamont Larsen	Will Marshall	Judy Matlock	Dean C. Miller	Zach Miller
R. Kirk Mueller	Sam Niebrugge	Laura Riese	Connie Rogers	Lucas Satterlee
Ben Strawn	Gail Wurtzler			

Members on the Move

Monica Genadio recently joined Innovative Compliance Inc., a startup consulting firm that provides environmental and pipeline regulatory compliance consulting services. Monica's background is in regulatory compliance, including in the environmental regulatory field and more recently with PHMSA and other Department of Transportation requirements. She has worked both for operators in the energy industry and as a consultant to public and private clients.



Monica's particular areas of expertise include environmental project management, training, hazardous and solid waste (RCRA, CERCLA, etc.), stormwater plans and compliance, wastewater management and discharge, and compliance audits. She also supports clients' operations by reviewing construction job books, preparing guidance documents and other compliance resources, and in other ways helping make regulatory compliance simple.

Monica has been involved with CEMS for several years, including helping plan the annual spring Movie Night. Monica may be reached at monica.genadio@iciteam.com, mgenadio@gmail.com, or 720-936-1694.

From the Board (continued from page 2)

Last, and certainly not least, I would like to thank Ms. Juliana Reid, CEMS' Administrative Assistant, for her tireless and often thankless work in 2018. Juliana really keeps the organization running and gets little to no recognition. Next time you see her, please give her a pat on the back for a job well done.

"The time is gone, the song is over, thought I'd something more to say."

David S. Lipson, Ph.D., P.G. is a consulting hydrogeologist specializing in groundwater and surface-water hydrology, groundwater-surface water interactions, fate and transport of contaminants, groundwater remediation, and geochemistry. Dr. Lipson brings more than 27 years of experience working throughout the US and internationally solving complicated water and environmental problems. He has taught groundwater engineering and remediation courses as an Adjunct Professor at Colorado School of Mines and as a Visiting Professor at the Chinese Academy of Sciences in Nanjing. He is an editor of the journal Groundwater and serves on the Board of Directors of the Scientists and Engineers Section of the National Ground Water Association (NGWA).

Candidates for CEMS Board – 2019

The Nominations Committee has collected nominations for the election of CEMS Officers and Board Members for 2019. Based on those nominations, the Committee has recommended and the CEMS Board of Directors has approved the following slate of candidates. The annual meeting and election will be held at the [December 11, 2018 CEMS luncheon](#). The election shall be decided by a majority of the members present at the meeting.

OFFICERS

President: Steve Brauner, PhD, PE, Integral Consulting
Vice President: Brian LaFlamme, Nationwide Environmental Services, Inc.
Secretary: Noreen Okubo, retired
Treasurer: John Fontana, Vista GeoScience
Past President: David Lipson, PhD, PG, HRS Water Consultants, Inc.

BOARD OF DIRECTORS

For one-year term in 2019 to complete Joe Dischinger's term

Andy Horn, Westwater Hydrology, LLC

For two-year term in 2019 and 2020

Mike Jahn, Tasman Geosciences, Inc.

Evan Singleton, Gablehouse Granberg, LLC

Fonda Apostolopoulos, Colorado Department of Public Health and Environment

Not Subject to Election (currently serving two-year term, 2018 and 2019)

Maggie Mandel, PE, Versar, Inc.

Erik Gessert, PE, Terracon Consultants, Inc.

REGULATORY LIAISONS

Non-voting and Not subject to election

Fonda Apostolopoulos, Colorado Department of Public Health and Environment

Rob Herbert, Colorado Division of Oil and Public Safety

Stephen Dymont, US Environmental Protection Agency, Region 8