

# TECHNICAL SESSIONS

- [Produced Water Management, Treatment & Beneficial Re-Use I](#) (Mt. Columbia)
- [Remediation of Brine Sills & Site Reclamation](#) (Mt. Wilson)
- [Bioremediation of Hydrocarbon Impacted Soils & Groundwater I](#) (Mt. Princeton)
- [Advancements in LNAPL Science](#) (Mt. Oxford)
  
- [In Situ Chemical Oxidation](#) (Mt. Oxford)
- [Remediation of Hydrocarbon Releases](#) (Mt. Columbia)
- [Bioremediation of Hydrocarbon Impacted Soils & Groundwater II](#) (Mt. Princeton)
- [Site Characterization & Forensic Geochemistry / Soil Vapor Extraction](#) (Mt. Wilson)
  
- [Produced Water Management, Treatment & Beneficial Re-Use II](#) (Mt. Columbia)
- [LNAPL Characterization & Recovery](#) (Mt. Princeton)
- [Environmental Issues in Production & Use of Unconventional Fuels / Waste Management & Pollution Prevention](#) (Mt. Wilson)
  
- [Exhibitor Showcase Session \(Planned\)](#) (Mt. Oxford)
  
- [Legal & Regulatory Issues / Environmental Management, Compliance & Auditing](#) (Mt. Princeton)
- [Bioremediation of Chlorinated Hydrocarbons, Oxygenates & Other](#) (Mt. Oxford)
- [Open Discussion on Produced Water](#) (Mt. Wilson)
  
- [Environmental Issues in Hydraulic Fracturing](#) (Mt. Columbia)
- [Open Discussion on Upstream Oil & Brine Spills](#) (Mt. Princeton)

**TUESDAY, NOVEMBER 17, 2015 – AFTERNOON**

## **PRODUCED WATER MANAGEMENT, TREATMENT & BENEFICIAL RE-USE I**

(Mt. Columbia)

Chairs: John & Deedee Boysen, BC Technologies, Laramie, WY

- [RISKS RELATED TO WATER AND WASTEWATER FOR AN OIL AND GAS COMPANY](#) 1:00 pm – 1:55 pm  
John Veil, Veil Environmental, LLC, Annapolis, MD
- [EXPANSION OF DISPOSAL WELL USAGE IN THE NORTH DAKOTA BAKKEN TO MEET DEMAND: PAST, PRESENT AND FUTURE](#) 1:55 pm – 2:20 pm  
Alex Zyskin, J. Daniel Arthur, Greg Casey, Tom Tomastic & Bobbi Lorengo, ALL Consulting, Tulsa, OK
- [AN ONLINE EXCHANGE FOR SOURCING, RECYCLING AND MANAGING WATER](#) 2:20 pm – 2:45 pm  
Joshua Adler, Sourcewater, Inc., Boston, MA; Sarah Fletcher, Massachusetts Institute of Technology, Cambridge, MA
- **Break** 2:45 pm – 3:10 pm
- [CASE STUDIES OF PARTICLE IMAGING TECHNOLOGY FOR DIFFERENTIATING PARTICLES IN PRODUCED WATER](#) 3:10 pm – 3:35 pm  
Kent Peterson & Steve Bowen, Fluid Imaging Technologies, Scarborough, ME
- [PRACTICAL TREATMENT OF PRODUCED AND FLOWBACK WATERS FOR RE-USE OR SURFACE DISCHARGE](#) 3:35 pm – 4:00 pm  
Eric Ringler & Bill Chatterton, Southern Research Institute, Durham, NC; Joon H. Min & Allen Chan, BKT United, Anaheim,

CA; Dave Philbrook, M2 Water Treatment, Inc., Raleigh, NC

- [HDPE LINED PRODUCED WATER EVAPORATION PONDS](#)

4:00 pm – 4:25 pm

Neil C. Nowak, SCS Aquaterra, Greenwood Village, CO

## REMEDIATION OF BRINE SPILLS & SITE RECLAMATION

(Mt. Wilson)

Chair: Kenneth Carlson, Habitat Management, Englewood, CO

- [NEAR-SURFACE GEOPHYSICAL APPLICATIONS TO ENVIRONMENTAL PETROLEUM ISSUES](#)

Nigel Crook, hydroGeophysics, Inc., Woodinville, WA; Allan Haas, hydroGeophysics, Inc., Richland, WA; Brian Cabbage & Gillian Noonan, hydroGeophysics, Inc., Tucson, AZ

1:30 pm – 1:55 pm

- [EFFECTS OF OILFIELD BRINE SPILLS ON THE MANAGEMENT OF NATIONAL WILDLIFE REFUGE SYSTEM LANDS](#)

Pedro Ramirez, Jr., U.S. Fish & Wildlife Service, Ft. Collins, CO

- [STUDY ON EX-SITU TREATMENT ON SALT WATER IMPACTED SOILS](#)

1:55 pm – 2:20 pm

Shane Currie & Jason Shubert, Talon/LPE, Amarillo, TX; William Rogers, Dustin Sanchez & Joe Bryan, West Texas A&M University, Canyon, TX

2:20 pm – 2:45 pm

**Break**

2:45 pm – 3:10 pm

- [LEVERAGING HOLISTIC HABITAT RESTORATION PLANNING TO REDUCE REMEDY COST](#)

Tim Johnson, Anchor QEA, LLC, Liverpool, NY

- [FIELD CHARACTERIZATION OF A BRINE SPILL SITE FOR LONG-TERM RECLAMATION SUCCESS](#)

Kenneth Carlson & Robin Bay, Habitat Management, Englewood, CO; Dustin Anderson, Oasis Petroleum, Williston, ND; Dave Edwards, Oasis Petroleum, Houston, TX

3:35 pm – 4:00 pm

- [A NOVEL PROCESS AND TECHNOLOGY FOR BRINE REMEDIATION](#)

William Lundy & Cheryl Rietjens, DeepEarth Technologies, Inc., Alsip, IL; Charles L. Williams, Illinois Petroleum Resources Board, Mt. Vernon, IL; Kerry L. Sublette, The University of Tulsa, Tulsa, OK

3:35 pm – 4:00 pm

## BIOREMEDIATION OF HYDROCARBON IMPACTED SOILS & GROUNDWATER I

(Mt. Princeton)

Chair: John Fontana, Vista Geoscience, Golden, CO

- [PETROLEUM REMEDIATION VIA \*IN SITU\* BIO REACTORS](#) 1:30 pm – 1:55 pm

Eric J. Raes, Engineering & Land Planning, High Bridge, NJ; Kerry Sublette, The University of Tulsa, Tulsa, OK; Kate Clark, Dora Ogles, Anita Biernacki & Bret Baldwin, Microbial Insights, Knoxville, TN
- [PRB TREATMENT FOR GROUNDWATER EXITING A NAPL CONTAINMENT AREA](#) 1:55 pm – 2:20 pm

Donald Pope, Sophia Dore & Christa Bucior, Conestoga-Rovers & Associates, Niagara Falls, NY; Alan Weston, Conestoga-Rovers & Associates, West Palm, FL
- [TREATMENT OF HYDROCARBON IMPACTED GROUNDWATER FROM A FORMER REFINERY USING MULTI-STAGE CONSTRUCTED WETLANDS](#) 2:20 pm – 2:45 pm

Martin I. Schmidt, AECOM, Cleveland, OH; Eric Lawson, Atlantic Richfield Co., Towson, MD; Scott Wallace, Naturally Wallace Consulting, Stillwater, MN; David Tsao, Atlantic Richfield Co., Naperville, IL
- Break** 2:45 pm – 3:10 pm
- [HIGH RESOLUTION INJECTIONS OF ACTIVATED CARBON, NUTRIENTS, AND BACTERIA TO SUPER-STIMULATE AEROBIC AND ANAEROBIC REMEDIATION OF PETROLEUM RELEASE SITES FOR FASTER SITE CLOSURE](#) 3:10 pm – 3:35 pm

John Fontana, Vista Geoscience, Golden, CO
- [A TECHNOLOGY PLATFORM TO HARNESS SPEED AND CERTAINTY IN GROUNDWATER REMEDIATION](#) 3:35 pm – 4:00 pm

Todd Herrington, Regenesys Remediation, San Clemente, CA
- [ASSESSING VERTICAL MICROBIAL TRANSPORT IN BEDROCK WELL COLUMN](#) 4:00 pm – 4:25 pm

Eric Raes, Bio-Enhance, High Bridge, NJ; Kerry Sublette, The University of Tulsa, Tulsa, OK

## [ADVANCEMENTS IN LNAPL SCIENCE](#)

(Mt. Oxford)

Chair: J. Michael Hawthorne, GEI Consultants, Keller, TX

- [COMPARISON OF LNAPL TRANSMISSIVITY DERIVED FROM BALLOON TESTS AND RECOVERY-BASED METHODS](#) 1:30 pm – 1:55 pm

Daniel J. Lombardi, St. John – Mittelhauser & Associates, Inc., Downers Grove, IL
- [FIELD COMPARISON OF NSZD ASSESSMENT METHODS: GRADIENT METHOD AND TWO CO<sub>2</sub> FLUX METHODS](#) 1:55 pm – 2:20 pm

Steven Gaito, ARCADIS, Braintree, MA; Andy Pennington, ARCADIS, Chicago, IL; Jonathon Smith, ARCADIS, Novi, MI; Brad Koons, ARCADIS, Minneapolis, MN; Harley Hopkins & Mark Malander, ExxonMobil Environmental Services, Houston, TX
- [COMPREHENSIVE STATISTICAL ANALYSIS OF LNAPL TRANSMISSIVITY](#)

J. Michael Hawthorne, GEI Consultants, Inc., Keller, TX

2:20 pm – 2:45 pm

**Break**

2:45 pm – 3:10 pm

- [SITE-SPECIFIC METHOD SELECTION FOR THE MEASUREMENT OF LNAPL TRANSMISSIVITY](#)

3:10 pm – 3:35 pm

J. Michael Hawthorne, GEI Consultants, Inc., Keller, TX

- [EVALUATING THE PRACTICALITY OF LNAPL RECOVERY](#)

4:00 pm – 4:25 pm

Jeff Lane, CK Associates, Houston, TX

**WEDNESDAY, NOVEMBER 18, 2015 - MORNING**

**IN SITU CHEMICAL OXIDATION**

(Mt. Oxford)

Chairs: William Lundy & Cheryl Rietjens, DeepEarth Technologies, Inc., Alsip, IL

- [THE RISE OF NEW IN SITU SOIL BLENDING AND VADOSE ZONE AMENDMENT STRATEGIES TO ACCELERATE SOURCE AND PLUME REMEDIATION](#)

Joseph Rossabi & John Haselow, Redox Tech, LLC, Cary, NC; Steve Markesic, Redox Tech, LLC, Downers Grove, IL; Ed Escochea, Redox Tech, LLC, Gainesville, GA; Jay Romano, Redox Tech, LLC, Attleboro, MA; Greg Powers, Redox Tech, LLC, Aiken, SC

8:35 am – 9:00 am

- [USE OF MORE EFFECTIVE, SAFER ISCO BY NON-EXTREME PERSULFATE ACTIVATION TO YIELD SUSTAINED SECONDARY TREATMENT](#)

Antonis Karachalios & Michael Scalzi, Innovative Environmental Technologies, Inc., Pipersville, PA; Jim Mueller, Provectus Environmental Products, Inc., Freeport, IL; Juan Felipe Molina, Provectus Columbia/EcoSoluciones, Ltda

9:00 am – 9:25 am

- [REMEDICATION OF A DIESEL FUEL RELEASE IN A SENSITIVE WETLAND AREA LOCATED IN BIG CYPRESS NATIONAL PRESERVE, FL](#)

9:25 am – 9:50 am

Keys Oakley & William Lundy, DeepEarth Technologies, Inc., Alsip, IL

- [IN SITU SEDIMENT TREATMENT: STATE OF THE PRACTICE](#)

9:50 am – 10:15 am

John P. Doody, Anchor QEA, LLC, Liverpool, NY; Clay Patmont, Anchor QEA, LLC, Seattle, WA

**Break**

10:15 am – 10:40 am

- [MORE EFFECTIVE AND SAFER ISCO TO TREAT PETROLEUM CONTAMINANTS](#)

Christopher Nelson, Provectus Environmental Products, Inc., Castle Rock, CO; Antonis Karachalios & Michael Scalzi, Innovative Environmental Technologies, Inc., Pipersville, PA; Jim Mueller, Provectus Environmental Products, Inc., Freeport, IL; Juan Felipe Molina, Provectus Columbia/Ecosoluciones, Ltda

10:40 am – 11:05 am

- [CAN A PILOT DEMONSTRATION BE TOO SMALL?](#)

11:05 am – 11:30 am

William Lundy, Sr, DeepEarth Technologies, Inc., Alsip, IL

**REMEDICATION OF HYDROCARBON RELEASES**

(Mt. Columbia)

Chair: Jeff Popiel, Geotech Environmental Equipment, Inc., Denver, CO

- [AVOIDING THE 10 BIGGEST MISTAKES IN GROUNDWATER REMEDIATION](#)

Jeff Popiel, Roy Cockwell, Joe Leonard, John Scripter & Mickele Bragg, Geotech Environmental Equipment, Inc., Denver, CO

8:35 am – 9:00 am

- [SURFACTANT ENHANCED PUSH-PULL METHOD FOR \*IN-SITU\* REMEDIATION OF PETROLEUM CONTAMINATED SOIL AND GROUNDWATER](#)

9:00 am – 9:25 am

George A. Ivey, Ivey International, Inc., Surrey, BC, Canada

- [FULL-SCALE DESIGN AND IMPLEMENTATION OF THE STAR TECHNOLOGY AT A COAL TAR-IMPACTED SITE](#)

9:25 am – 9:50 am

David Major, Gavin P. Grant & Grant Scholes, Savron, Guelph, Ontario, Canada; Len den Vlaming, Geosyntec Consultants, Guelph, Ontario, Canada

- [PIPELINES AS PREFERENTIAL PATHWAYS: USE OF MATERIALS FOR CONSTRUCTION WHICH CAN SEAL OR TREAT POTENTIAL LEAKS OR VOIDS](#)

9:50 am – 10:15 am

John H. Hull & John Collins, Aquablok Ltd., Toledo, OH

**Break**

10:15 am – 10:40 am

- [MIDDLE EAST PETROLEUM BULK PLANT REMEDIATION STRATEGY](#)

10:40 am – 11:05 am

R. William Johnston, Linebach Funkhouser, Inc., Louisville, KY

- [SCALABLE ENVIRONMENTAL CONTROL SYSTEMS WITH REMOTE MONITORING AND SOLAR POWERED PNEUMATIC RECOVERY OF FREE PHASE HYDROCARBONS](#)

11:05 am – 11:30 am

Jeff Popiel, Joe Leonard & Roy Cockwell, Geotech Environmental Equipment, Inc., Denver, CO

- [\*EX-SITU\* SMOLDERING COMBUSTION FOR SOIL REMEDIATION AND/OR OILY WASTE MANAGEMENT](#)

11:30 am – 11:55 am

Gabriel Sabadell, Chevron Energy Technology Company, Houston, TX; David Major, Grant Scholes, Gavin P. Grant, Cody Murry, David Liefel, Benoit Boulay & Laura Kinsman, Savron, Guelph, Ontario; David Thomas, Chevron, Perth, Australia

## **BIOREMEDIATION OF HYDROCARBON IMPACTED SOILS & GROUNDWATER II**

(Mt. Princeton)

Chair: Paul McKay, Bioxy Research, Littleton, CO

- [UTILIZING AN \*IN SITU\* GROUNDWATER RECIRCULATION BIOREMEDIATION PROCESS TO REMEDIATE A HYDROCARBON RELEASE ON AN ACTIVE CRUDE OIL PRODUCTION PAD, NORTH DAKOTA](#)

8:35 am – 9:00 am

Eric Bueltel, ETEC, LLC, Centennial, CO

- [STABLE ISOTOPE PROBING \(SIP\) AND QUANTARRAY TO EVALUATE THE FEASIBILITY OF MONITORED NATURAL ATTENUATION OF PETROLEUM HYDROCARBONS AND EMERGING CONTAMINANTS](#)

9:00 am – 9:25 am

Dora Ogles, Casey Brown, Katherine Clark & Brett R. Baldwin, Microbial Insights, Knoxville, TN

- [NAVIGATION OPTIONS FOR DIRECTIONAL ENVIRONMENTAL WELLS](#)

9:25 am – 9:50 am

Michael D. Lubrecht, Directed Technologies Drilling, Inc., Bremerton, WA

- [A TREE-BASED REMEDIATION SYSTEM FOR TREATMENT AND HYDRAULIC CONTROL OF A HYDROCARBON PLUME IN A 20 FOOT DEEP AQUIFER AT A FORMER REFINERY IN CENTRAL OKLAHOMA](#)

9:50 am – 10:15 am

Edward Gatliff, Applied Natural Sciences, Inc., Hamilton, OH; Brad Snow, Snow Environmental

Solutions, LLC, Austin, TX

**Break**

10:15 am – 10:40 am

- [PHYTOREMEDIATION OF PAHs: DESIGNING FOR SUCCESS](#)

10:40 am – 11:05 am

Michael Jordan, Terracon, Raleigh, NC; Linda Yang, Terracon, Naperville, IL

- [RECENT DEVELOPMENT OF COST-EFFECTIVE \*IN-SITU\* BIO-REMEDICATION IN THE OILFIELD](#)

Paul McKay, Bioxy Research, Littleton, CO; Jason McMillan, Bioxy Research, Layton, UT; Dan Burdette, 3Tier Technologies, Longwood, FL

11:05 am – 11:30 am

- [BIOREMEDIATION OF WEATHERED CRUDE OIL IN COMPLEX SOILS: A SOUTHERN MINNESOTA FIELD STUDY](#)

11:30 am – 11:55 am

Jeff A. Powell & Keith Rapp, Pinnacle Engineering, Maple Grove, MN

**SITE CHARACTERIZATION & FORENSIC GEOCHEMISTRY /**

**SOIL VAPOR EXTRACTION**

(Mt. Wilson)

Chair: David S. Bardsley, Directed Technologies Drilling, Inc., Scottsdale, AZ

**SITE CHARACTERIZATION & FORENSIC GEOCHEMISTRY**

- [SOIL SAMPLING UTILIZING HORIZONTAL/DIRECTIONAL DRILLING METHODS](#)

David S. Bardsley, Directed Technologies Drilling, Inc., Scottsdale, AZ; Dan Ombalski, Directed Technologies Drilling, Inc., Bellefonte, PA

8:35 am – 9:00 am

- [UNEXPLODED ORDNANCE INVESTIGATION OF CONTAMINATED FEATURES FILLED WITH WEATHERED CRUDE](#)

9:00 am – 9:25 am

Khaled Al-Haid, Mansour Al-Khareji & Krishna Vangala, Kuwait Oil Company, Ahmadi, Kuwait

- [KUWAIT ENVIRONMENTAL REMEDIATION PROGRAM \(KERP\): RISK BASED APPROACH PROCESS](#)

9:25 am – 10:00 am

Dhari Al-Gharabally, Alberto De La Roche & Aisha Al-Barood, Kuwait Oil Company, Ahmadi, Kuwait

**Break**

10:15 am – 10:40 am

**SOIL VAPOR EXTRACTION**

- [FULL-SCALE IMPLEMENTATION OF A PULSED AIR SPARGE SYSTEM FOR TREATMENT OF VOCs, SVOCs, AND ARSENIC](#)

Kale Novalis, Langan Engineering, Morristown, NJ; Omer J. Uppal, Matthew Ambrusch, Nadira Najib & Steve Ciambuschini, Langan Engineering & Environmental Services, Elmwood Park, NJ; Annie Lee, Langan, San Francisco, CA

10:40 am – 11:05 am

- [2015 UPDATE AND PERFORMANCE EVALUATION OF INNOVATIVE REMEDIATION SOLUTIONS FOR REMOTE LOCATIONS](#)

11:05 am – 11:30 am

Robert Rebel & Steve Khan, LT Environmental, Inc., Arvada, CO

- [OFF GRID SOLAR REMEDIATION](#)

11:30 am – 11:55 am

Barry Zvibleman, Onion Equipment, LLC, Naples, FL

**WEDNESDAY, NOVEMBER 18, 2015 - AFTERNOON**

## PRODUCED WATER MANAGEMENT, TREATMENT & BENEFICIAL RE-USE II

(Mt. Columbia)

Chairs: John & Deedee Boysen, BC Technologies, Laramie, WY

- [NEW INFORMATION ON PRODUCED WATER VOLUMES AND MANAGEMENT PRACTICES](#) 1:30 pm – 1:55 pm  
John Veil, Veil Environmental, LLC, Annapolis, MD
  - [APPLICATIONS OF THE U.S. GEOLOGICAL SURVEY PRODUCED WATERS GEOCHEMICAL DATABASE FOR ENVIRONMENTAL OIL AND GAS OPERATIONS](#) 1:55 pm – 2:20 pm  
Mark A. Engle, U.S. Geological Survey, UTEP – Dept. of Geological Sciences, El Paso, TX; Kathleen D. Gans, James T. Thordsen & Yousif K. Kharaka USGS, Menlo Park, CA; Madlyn S. Blondes, Mark E. Reidy & Elisabeth L. Rown, USGS, Reston, VA
  - [THE OKLAHOMA WATER CONUNDRUM](#) 2:20 pm – 2:45 pm  
Steve Tipton, J. Daniel Arthur & David Alleman, ALL Consulting, Tulsa, OK
  - [THE USE OF MINIATURIZED DETECTION TECHNOLOGY WITH THE IPHONE OR ANDROID TO DETERMINE WATER COMPOSITION AND BACTERIOLOGICAL LOAD OF AGRICULTURAL AND INDUSTRIAL WATER SOURCES](#) 2:45 pm – 3:10 pm  
Frank M. Platt, David B. Burnett & Carl Vavra, Texas A&M University, Department of Petroleum Engineering, College Station, TX
- Break**
- [ENGAGING THE STATE \(OF NEW MEXICO\) – ADVANCING THE USE AND REUSE OF BRACKISH AND PRODUCED WATERS](#) 3:10 pm – 3:35 pm  
Jeri Sullivan Graham, Los Alamos National Laboratory, Los Alamos, NM
  - [PRODUCED WATER TREATMENT FOR RECYCLE](#) 3:35 pm – 4:00 pm  
Dan Mueller, Environmental Defense Fund, Austin, TX
  - [NATIONAL EVALUATION FOR DEVELOPMENT AND EXPLORATION POTENTIAL OF MINERAL COMMODITIES IN PRODUCED WATERS](#) 4:00 pm – 4:25 pm  
Stephanie L. Ray, Dept. of Geological Sciences, University of Texas at El Paso, El Paso, TX; Mark A. Engle, U.S. Geological Survey, Reston, VA
  - [HYDRAULIC FRACTURING WITH CRYOGENIC FLUIDS: BOOSTING HYDROCARBON RECOVERY WHILE CONSERVING FRESH WATER RESOURCES](#) 4:25 pm – 4:50 pm  
Andre Tweed, Ferus LP, Denver, CO; Murray Reynolds, Juliana Buendia & Krefthelle Moscoso, Ferus, Inc., Calgary AB, Canada
  - [APPLICATIONS OF PRODUCED WATER IN BIODIESEL PRODUCTION AND DISTRIBUTION](#) 4:50 pm – 5:15 pm  
Soumya Yadala & Selen Cremaschi, The University of Tulsa, Tulsa, OK
- 5:15 pm – 5:40 pm

## LNAPL CHARACTERIZATION & RECOVERY

(Mt. Princeton)

Chair: Andy Pennington, ARCADIS, Chicago, IL

- [QUANTIFICATION OF VAPOR-PHASE RECOVERY](#) 1:30 pm – 1:55 pm

Ian Holst, Justin Kennedy & Christopher Proce, Roux Associates, Inc., Islandia, NY
- [AUTOMATED LNAPL BAILOWDOWN TESTING EQUIPMENT: BETTER, CHEAPER, SAFER DATA](#) 1:55 pm – 2:20 pm

Andy Pennington, ARCADIS, Chicago, IL; Jonathon Smith, ARCADIS, Nova, MI; Steve Gaito, ARCADIS, Braintree, MA
- [AN EVALUATION OF NATURAL SOURCE ZONE DEPLETION VERSUS ACTIVE REMEDIATION RATES](#) 2:20 pm – 2:45 pm

Nicholas Mahler, Tom Palaia & Becky Rewey, CH2M, Englewood, CO
- [STATUS OF STEAM ENHANCED EXTRACTION FOR LNAPL SITES \(I\)](#) 2:45 pm – 3:10 pm

Gorm Heron. TerraTherm, Keene, CA; Devon Phelan, TerraTherm, Denver, CO; Steffen G. Nielsen, TerraTherm, Gardner, MA
- Break** 3:10 pm – 3:35 pm
- [STATUS OF STEAM ENHANCED EXTRACTION FOR LNAPL SITES \(II\)](#) 3:35 pm – 4:00 pm

Gorm Heron. TerraTherm, Keene, CA; Devon Phelan, TerraTherm, Denver, CO; Steffen G. Nielsen, TerraTherm, Gardner, MA
- [THERMAL-ENHANCED REMEDIATION OF RESIDUAL LNAPL](#) 4:00 pm – 4:25 pm

Lloyd “Bo” Stewart, Praxis Environmental Technologies, Inc., Burlingame, CA; Joe Rossabi, Redox Tech, LLC, Cary, NC
- [AN INTEGRATED MULTIPHASE EXTRACTION, SOIL VAPOR EXTRACTION, AND AIR SPARGING APPROACH FOR TREATMENT OF LNAPL IMPACTS](#) 4:25 pm – 4:50 pm

Kale Novalis, Langan Engineering, Morristown, NJ; Omer J. Uppal, Christopher McMahon, Matthew Ambrusch, Nadira Najib & Steve Ciambuschini, Langan Engineering & Environmental Services, Elmwood Park, NJ; Imtiyaz Khan & Stewart Abrams, Langan, Lawrenceville, NJ

## ENVIRONMENTAL ISSUES IN PRODUCTION & USE OF UNCONVENTIONAL FUELS /

### WASTE MANAGEMENT & POLLUTION PREVENTION

(Mt. Wilson)

Chair: Krishna Vangala, Kuwait Oil Company, Ahmadi, Kuwait

## ENVIRONMENTAL ISSUES IN PRODUCTION & USE OF UNCONVENTIONAL FUELS

- [TENORM RADIATION SAFETY FROM OIL AND GAS PRODUCTION](#) 1:30 pm – 1:55 pm

Alan Fellman, Dade Moeller & Associates, Inc., Gaithersburg, MD
- [CONTRIBUTING FACTORS TO THE FOUR CORNERS METHANE HOT SPOT AND CONVERTING FUGITIVE METHANE GAS EMISSIONS INTO A VIABLE RESOURCE](#) 1:55 pm – 2:20 pm

Ashley Ager, Devin Henemann, LT Environmental, Inc., Durango, CO; Chris Shephard, LT Environmental, Inc., Arvada, CO
- [DRAG REDUCTION EFFICIENCY OF RED ALGAL EXTRACELLULAR POLYSACCHARIDES](#) 2:20 pm – 2:45 pm

Yang He, Daniel Crunkleton, Tyler Johannes & Michael Keller, The University of Tulsa, Tulsa, OK



## WASTE MANAGEMENT & POLLUTION PREVENTION

- [LEAN FOR ENVIRONMENTAL REMEDIATION PORTFOLIO MANAGER SUCCESS](#)

Bethany Zinni, Sue Boyle & Steve McIntyre, Haley & Aldrich, Inc., Rochester, NY; Jeffrey Baker, Tesoro Corporation, Auburn, WA

2:45 pm – 3:10 pm

### Break

3:10 pm – 3:35 pm

- [RECOVERY OF WEATHERED CRUDE FROM LARGE OIL PITS – CASE STUDY](#)

3:35 pm – 4:00 pm

Krishna Vangala, Mansour Al-Khareji, Khaled Al-Haid, Kuwait Oil Company, Ahmadi, Kuwait

- [INVESTIGATING THE ENZYMATIC BASIS OF SULFIDE PRODUCTION IN NON-SRB FERMENTATIVE MICROORGANISMS ISOLATED FROM HIGH BRINE OIL PRODUCTION FACILITIES](#)

4:00 pm – 4:25 pm

Annette De Capite, Kathleen E. Duncan & Ralph S. Tanner, The University of Oklahoma, Department of Microbiology and Plant Biology, Norman, OK

- [HISTORIC OILFIELD ARSENIC SOURCES: IMPLICATIONS FOR A PIT GROUNDWATER MODEL, LAKE ST. JOHN FIELD, LA, AN UPDATE](#)

4:25 pm – 4:50 pm

Mary Barrett, Barrett Consulting, Shreveport, LA

## EXHIBITOR SHOWCASE SESSION (PLANNED)

(Mt. Oxford)

Chair: Naggs Nagghappan, Veolia Water Technologies, Brea, CA

- [THE USE OF HORIZONTAL DRILLING FOR REMEDIATION ACTIVITIES AT SMALL SITES](#)

1:30 pm – 1:55 pm

David S. Bardsley, Directed Technologies Drilling, Inc., Scottsdale, AZ

- [LOW-PERMEABILITY CONSTRUCTION MATERIALS TO ADDRESS POTENTIAL SPREAD OF CONTAMINANTS AND SPCC RULES](#)

1:55 pm – 2:20 pm

John Collins, AquaBlok, Ltd., Toledo, OH

- [SUCCESSFULLY APPLYING BIOREMEDIATION AT UPSTREAM, MIDSTREAM, DOWNSTREAM AND RETAIL SITES](#)

2:20 pm – 2:45 pm

Eric Bueltel, ETEC, LLC, Centennial, CO

- [EMERGING TECHNOLOGIES FOR PRODUCED WATER TREATMENT](#)

2:45 pm – 3:10 pm

Naggs Nagghappan, Veolia Water Technologies, Brea, CA

### Break

3:10 pm – 3:35 pm

- [APPLIED IN-SITU SURFACTANT APPLICATION](#)

3:35 pm – 4:00 pm

George A. Ivey, Ivey International, Inc., Surrey, BC, Canada

- [USING AN INTERNET MARKETPLACE FOR PRODUCED WATER DISPOSAL LOGISTICS OPTIMIZATION](#)

4:00 pm – 4:25 pm

Joshua Adler, Sourcewater, Inc., Rye, NH

- [NEW REMEDIAL DESIGN CHARACTERIZATION \(RDC\) AND IN-SITU TREATMENT INJECTION METHODS FOR EFFECTIVE SITE CLOSURE--IT'S A CONTACT SPORT!!](#)

4:25 pm – 4:50 pm

John V. Fontana, Vista GeoScience, Golden, CO

- **IPEC CONNECT: NETWORKING RECEPTION** (*Maroon Peak, 2<sup>nd</sup> Floor*)

5:15 pm – 6:15 pm

- **MID-CONFERENCE WORKSHOP** (*Mt. Princeton*)

- [ENVIRONMENTAL CHEMISTRY MADE EASY FOR SITE INVESTIGATION AND REMEDIATION](#)

6:30 pm – 9:30 pm

Instructor: George (Bud) Ivey, President, Ivey International, Inc., Surrey, BC, Canada)

## THURSDAY, NOVEMBER 19, 2015 - MORNING

### LEGAL & REGULATORY ISSUES /

### ENVIRONMENTAL MANAGEMENT, COMPLIANCE & AUDITING

(Mt. Princeton)

Chair: Jeffrey M. Baker, Tesoro Corporation, Auburn, WA

#### LEGAL & REGULATORY ISSUES

- [LARGE SCALE SOLUTIONS TO RESOLVING ENDANGERED SPECIES ACT CONFLICTS](#)

8:35 am – 9:00 am

Steven Paulson, aci consulting, a division of aci group, llc, Austin, TX

- [MACHINE GUARDING IN THE OIL AND GAS INDUSTRY: BASICS AND CASE STUDIES](#)

9:00 am – 9:25 am

Charles M. Koch, Robson Forensic, LLC, Denver, CO; Michael Klein, Robson Forensic, LLC, Charleston, SC

- [THE EMERGENCE OF DIFFUSE RIGHTS AND PUBLIC PARTICIPATION IN ENVIRONMENTAL CASES](#)

9:25 am – 9:50 am

Wade M. Coriell & Anisha Sud, King & Spalding LLP, Houston, TX

#### ENVIRONMENTAL MANAGEMENT, COMPLIANCE & AUDITING

- [STAKEHOLDER RELATIONSHIP MANAGEMENT](#)

9:50 am – 10:15 am

Jeffrey M. Baker, Tesoro Corporation, Auburn, WA; Steve Jensen & Patty Jensen, Tioga, ND; Bill Suess, North Dakota Dept. of Health, Water Quality Division, Bismarck, ND

#### Break

10:15 am – 10:40 am

- [CONTINUOUS BENZENE-SPECIFIC MONITORING](#)

10:40 am – 11:05 am

Werner R. Haag, Ion Science USA, San Jose, CA; Stephen Powell, Ion Science, The Way, Fowlmere, Cambs, UK

- [ENVIRONMENTAL APPLICATIONS FOR UNMANNED AIRCRAFT SYSTEMS](#)

11:05 am – 11:30 am

Jeff Popiel, Mickle Bragg & Joe Leonard, Geotech Environmental Equipment, Inc., Denver, CO; Scott Heath & John Oakley, Lepton, Denver, CO

#### BIOREMEDIATION OF CHLORINATED HYDROCARBONS, OXYGENATES & OTHER

(Mt. Oxford)

Chair: Kent Armstrong, BioStryke Remediation Products LLC, Andover, NH

- [HIGHLY SUCCESSFUL ERD PILOT STUDY IN RESIDUAL DNAPL](#)

8:35 am – 9:00 am

Kent Armstrong, BioStryke Remediation Products LLC, Andover, NH; Barbara L. Forsland, Advanced Geoservices, West Chester, PA

- [HIGHLY SUCCESSFUL ERD PILOT EVALUATION](#)

9:00 am – 9:25 am

Kent Armstrong, BioStryke Remediation Products LLC, Andover, NH; James Romeo, ITB, Inc., Merritt Island, FL

- [ENHANCED TREATMENT WETLANDS FOR ETHANOL REMOVAL](#)

9:25 am – 9:50 am

Amanda Ludlow & Kathryn Szymaszek, Roux Associates, Inc., Islandia, NY

- [HIGH RESOLUTION SITE CHARACTERIZATION OF 1,4 DIOXANE SITES USING A NEW ON-SITE,](#)

[REAL TIME ANALYSIS](#)

9:50 am – 10:15 am

William M. Davis & Christopher Horrell, Triad Environmental Solutions, Inc., Durham, NC

10:15 am – 10:40 am

**Break**

- [INNOVATIVE CHEMICAL TREATMENT OF TBT \(TRIBUTYL TIN\)-IMPACTED MARINE SEDIMENTS: A BENCH SCALE STUDY](#)

10:40 am – 11:05 am

George A. Ivey, Ivey International, Inc., Surrey, BC, Canada

**OPEN DISCUSSION ON PRODUCED WATER**

(Mt. Wilson)

Chair: John Veil, Veil Environmental, LLC, Annapolis, MD

8:35 am – 11:55 am

**Break**

10:15 am – 10:40 am

This session departs from the usual IPEC format of presented papers. Instead, the session chair will give a brief introduction, and then open the floor for participants to ask questions on water topics. The other participants in the session can share their views and respond to the questions. The session will be informal and will allow for productive discussion among the participants.

**THURSDAY, NOVEMBER 19, 2015 - AFTERNOON**

**ENVIRONMENTAL ISSUES IN HYDRAULIC FRACTURING**

(Mt. Columbia)

Chair: B.W. McDaniel, Halliburton Energy Services, Duncan, OK

- [ENVIRONMENTAL ISSUES & DAUBERT CHALLENGES IN RECENT LITIGATION](#)

1:30 pm - 1:55 pm

Richard C. Bost, 12M Associates, Waller, TX; Michael D. Campbell, 12M Associates, Houston, TX

- [USING BRACKISH GROUNDWATERS AS INDICATORS FOR POTENTIAL IMPACTS FROM DEEPER OIL AND GAS ACTIVITIES](#)

1:55 pm – 2:20 pm

Mark A. Engle & Francisco R. Reyes, U.S. Geological Survey, UTEP–Dept. of Geological Sciences, El Paso, TX

- [INNOVATION IN THE OILFIELD: HOW BEST MANAGEMENT PRACTICES HAVE REDUCED THE IMPACTS OF SHALE DEVELOPMENT](#)

2:20 pm – 2:45 pm

Mark Faucher, J. Daniel Arthur & Nathan Alleman, ALL Consulting, Tulsa, OK; ALL Consulting, Houston, TX

- [HUMAN HEALTH AND ENVIRONMENTAL ISSUES SURROUNDING HYDRAULIC FRACTURING: A CANADIAN PERSPECTIVE](#)

2:45 pm – 3:10 pm

Donald B. Davies & Thia Sterling, Intrinsic Environmental Services, Inc., Calgary, Alberta, Canada

**Break**

3:10 pm – 3:35 pm

- [REVIEW OF INDUSTRY METHODS FOR SOURCING, STORING, AND TREATING REUSE WATER FOR HIGH-VOLUME FRACTURING APPLICATIONS](#)

3:35 pm - 4:00 pm

B.W. McDaniel, Halliburton Energy Services, Duncan, OK

**OPEN DISCUSSION ON UPSTREAM OIL & BRINE SPILLS**

(Mt. Princeton)

Chair: Dr. Kerry L. Sublette, The University of Tulsa, Tulsa, OK

1:30 pm – 4:25 pm

**Break**

3:10 pm – 3:35 pm

This session departs from the usual IPEC format of presented papers. Instead, the session chair will give a brief introduction, then open the floor for participants to ask questions on topics related to spills of hydrocarbons and produced water in the E&P environment. The other participants can share their views and respond to the questions. The session will be informal and will allow for a productive discussion among the participants.

**CONFERENCE CLOSES**