Program

Overcoming the Technical and Community Challenges of Hydraulic Fracturing for Shale Gas

August 4-8, 2013

Boulder, Colorado

Conference Chairs:

Dr. Danny Reible
Center for Research in Water Resources, University of Texas

Dr. Margaret MacDonell
Environmental Sciences Division Argonne National Laboratory

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Sunday, August 4, 2013

17:00 – 18:30  Conference Check-in (Sunshine Room)
18:00 – 20:00  Opening reception (Firepit)

NOTES

- Audiotaping, videotaping and photography of presentations are strictly prohibited.
- Please do not smoke at any conference functions.
- Turn your mobile phones to vibrate or off during technical sessions.
- Technical Sessions will be in the Canyon Ballroom.
- Breakasts will be in the Restaurant.
- Lunches will be in the Garden and the banquet will be in the Century Room.
- Social Hours will be in the Sunshine Room and Foyer.
- Be sure to check your contact information on the Participant List in this program and make any corrections to your name/contact information online. A corrected copy will be sent to all participants after the conference.
- Speakers – Please leave at least 5 minutes for questions and discussion. Be available for discussion during meals and social periods
Monday, August 5, 2013

07:30 - 09:00 Breakfast

09:00 – 09:15 Welcome and Introduction to the conference
Danny Reible and Margaret MacDonell, Conference Chairs
Nicholas Clesceri, ECI Technical Liaison

09:15 – 10:00 Status: Shale gas extraction
Danny Reible, University of Texas

10:00 – 10:30 Shale gas and sustainable development
Deborah Shields, Colorado State University

10:30 – 11:00 Coffee break

Subsurface Processes and Hydraulic Fracturing

11:00 – 11:30 Assessing the subsurface geologic risks for hydraulic fracturing
Jon Olson, University of Texas

11:30 – 12:00 Two-year surveys comparing earthquake activity and injection/extraction well locations in the Barnett Shale and Eagle Ford of Texas
Cliff Frohlich, University of Texas

12:00 – 12:30 Feasibility of using depleted shales as a repository for permanent storage of CO₂
Andres Clarens, University of Virginia

12:30 – 14:00 Lunch

14:00 – 16:30 Free time / Opportunities for sightseeing and networking

16:30 – 17:00 Coffee break

17:00 – 17:30 Formation and transportation of barite in subsurface
Can He, University of Pittsburgh

17:30 – 18:00 Impact of water chemistry on trace element mobilization from shales
Lin Wang, Washington University of St. Louis

18:00 – 18:30 New ultra high performance Ferrium® steels for demanding fracking applications
Jeff Grabowski, QuesTek Innovations

18:30 – 19:00 Computational tribology – A method to reduce wear, friction & fluids for shale gas hydraulic fracturing
Ward Thomas, Sentient Science

19:00 – 19:30 Social Period

19:30 Free evening / Dinner on your own
Tuesday, August 6, 2013

07:30 - 09:00   Breakfast

Subsurface Impacts on Water

09:00 – 09:30   Water use and consumption for hydraulic fracturing: A Texas study
                JP Nicot, University of Texas

09:30 – 10:00   Water quality concerns surrounding shale gas development in the Michigan Basin
                Brian Ellis, University of Michigan

10:00 – 10:30   Water quality impacts of shale gas development
                Roxana Darvari, University of Texas

10:30 – 11:00   Coffee break

11:00 – 11:30   Disclosure of fracturing fluids
                Terence Centner, University of Georgia

11:30 – 12:00   Carbon dioxide hydraulic fracturing: A path forward to sustainable unconventional hydrocarbon management
                Mark Holtz, Praxair

12:00   Boxed Lunch

12:30   Optional Excursion - TBA
Wednesday, August 7, 2013

07:30 - 09:00  Breakfast

Characteristics and Management of Flowback and Produced Water

09:00 – 09:30  An expedited method for Ra-226 measurement and fate of Ra-226 from flowback/produced water in centralized impoundments and treatment facilities
Tieyuan Zhang, University of Pittsburgh

09:30 – 10:00  Produced water management: Importance of microbial ecology for the fate of naturally occurring radioactivity
Kelvin Gregory, Carnegie Mellon University

10:00 – 10:30  Evaluating characteristics of source, flowback, and produced water for effective water treatment
Scott Tucker, Hach

10:30 – 11:00  Coffee break

11:00 – 11:30  Developing a framework for sustainable flowback water management
Neha Mehta, MIT

11:30 – 12:00  Hydraulic fracturing - Water reuse challenges and solutions
Andrew Collier, GE

12:00 – 12:30  Concern and potential of flowback treatment and reuse - German approach
Dirk Weichgrebe, ISAH, Leibniz University

12:30 – 14:00  Lunch

14:00 – 16:30  Free time / Opportunities for networking

16:30 – 17:00  Coffee break

Community and Environmental Risks of Hydraulic Fracturing

17:00 – 17:30  Continuous monitoring of stable carbon isotopes for methane source determination at a Marcellus Shale development site in southwestern PA
Matt Reeder, National Energy Technology Laboratory

17:30 – 18:00  Effects of produced water management options on drinking water treatment systems
Jeanne VanBriesen, Carnegie Mellon University

18:00 – 18:30  Soil erosion and surface water quality impacts of natural gas development in east Texas, USA
Matt McBroom, SF Austin St University
Wednesday, August 7, 2013 (continued)

18:30 – 19:00  Environmental remediation and restoration management: Lessons learned from DOE-EM  
Dawn Wellman, Pacific Northwest National Laboratory

19:00 – 19:30  Reception

19:30 – 21:30  Conference Banquet
Thursday, August 8, 2013

07:30 - 09:00  Breakfast

Departures