

Shale Network Presentations – May 7-8

Posters

S. Arjmand, J. Abad, V. Khanna - “Quantifying the Environmental Impacts of Shale Gas Wastewater Treatment Strategies: Comparison of Onsite Treatment for Reuse and Reinjections to Treatment in Plants to Recycle”

K. Brasier, J. Pollak – “Testing for Environmental Justice Implications of Marcellus Shale Violations by Combining Shale Network and Social Science Data”

P. DeBarber, M. Pohl, D. Vojtko - Numerous Tools Benefit Water Issues for Shale Gas Applications

M. Gonzales, F. Wu, Z. Li, S. Brantley, C. You - Detecting Surface Water Contamination Events from Unconventional Drilling Operations in PA Using Publicly Available Water Quality Databases

Y. Han, S. Arjmand, J. Abad, R. Vidic, C. Simon, C. Wilderman, S. Brantley, C. Fu - Spatial and Temporal Characterization of Watersheds and Stream Contamination Near Unconventional Drilling Sites

C. He, R. Vidic - Use of Abandoned Mine Drainage for the Development of Unconventional (Shale) Gas Resource

K. Homman, A. Nyblade - “Seismicity in Pennsylvania”

S. Hynek, T. Sowers, S. Brantley (Penn State), J. Lemon (Trout Unlimited) - “A Growing Effort in Monitoring Stream Methane Concentrations in Pennsylvania”

W. Kosmer, S. Pelepko, S. Beattie, H. Wise - Case Study of Stray Gas Migration Incident Associated with Unconventional Shale Development in Northeastern Pennsylvania

J. Lemon, K. Fesenmyer - Angler Scientists Monitoring Shale Gas Development Impacts in Central Appalachia

N. Mehta, F. O’Sullivan - Water Management in Hydraulic Fracturing - A Planning and Decision Optimization Platform

T. Tasker, W. Burgos, C. Gorski - Organic Fate and Fluid Chemistry of Synthetic Fracturing Fluids Reacted with Marcellus Shale

Teen Shale Network (30) students (5) teaches (5) PSU - Using the Shale Network to Train Future Scientists

D. Yoxtheimer, C. Simon, S. Arjmand - Estimates of Shale Energy Wastewater Discharge Loading to Select Receiving Streams Based on Use of Form 26R Data from Southwestern Pennsylvania

Oral Presentations

J. Abad, Y. Han, C. Simon, S. Arjmand, C. Wilderman, S. Brantley, R. Vidic: “Modelling PA Streams to Determine Monitoring Gaps and Optimum Sensor Spacing”

D. Akob: “Unconventional Oil and Gas Wastewater Impoundment Leaks and Spills: A Combined Field and Laboratory Study of Biogeochemical Processes”

N. Azzolina, E. Perry, B. Smith, D. Siegel: “Methane Concentrations in Water Wells Unrelated to Proximity to Existing Oil and Gas Wells in Northeastern Pennsylvania”

F. Baldassare: “Regional Variability in the Gas Geochemistry of the Appalachian Basin & Implications for Investigations of Stray Gas in an Aquifer System”

E. Betanzo, E.R. Hagen, J.T. Wilson, K.H. Reckhow, L. Hayes, D.M. Argue: “Availability of Water Data to Answer Priority Policy Questions: Evaluation of Available Water-quality Data to Determine Whether Shale Gas Development Activities Contaminate Surface Water or Groundwater in the Susquehanna River Basin”

L. Chapman: “The Use of Strontium Isotope and Element Geochemistry to Characterize Water from Fossil Fuel Sources”

I. Cozzarelli “USGS Toxics Program Integrated Field Studies of Leaks and Spills Related to Unconventional Oil and Gas Development Wastes”

T. Darrah, A. Vengosh, R. Jackson, N. Warner, B. Poreda: “Gas Leaks from Badly Constructed Wells Linked to Contamination in Groundwater, Not Hydraulic Fracturing”

M. Khalequzzaman, E. Pirrone, A. Neidig, T. Keane: “Community-based Water Quality Monitoring Projects in Marcellus Shale Gas Drilling Regions in Centre, Clearfield, and Clinton Counties, PA”

K. Klemow, D. Bruns, B. Naberezny: “Stream Macroinvertebrate Indicator Response to Selected Measures of Habitat, Water Chemistry, Land Use, and Marcellus Shale Gas Development in the Susquehanna Basin of Northeastern Pennsylvania”

G. Llewellyn, F.L. Dorman, J.L. Westland, D. Yoxtheimer, P. Grieve, T. Sowers, E. Humson-Fulmer, S.L. Brantley – “Evaluating a Groundwater Supply Contamination Incident Due to Marcellus Shale Gas Development”

J. Li, S. Brantley: “Data Mining on Water Quality Data”

D. Manthos: “(Waste) Water, Water Everywhere – Mapping Drilling Impoundments in Pennsylvania through Crowdsourcing Analysis of Aerial Survey Imagery”

S. Pelepko, S. Beattie, H. Wise, W. Kosmer: “Integrating Data to Identify Evidence of Anthropogenic Stray Gas Migration and Develop Tools for Assessing Water Supply Complaints”

D. Risser, V.M. Heilweil, P.L. Grieve, S. Hynek, S. Brantley, D. Solomon: “Stream Monitoring for Estimating Methane in Groundwater Discharge to Streams – Lessons learned from a Pilot Study in Northern Pennsylvania”

R. Sims, M. Yarrow, S.M. Penningroth, A.X. Figueroa: “A Regional Baseline of Pre-Fracking Groundwater Quality in Rural Upstate New York”

B. Smith, D. Siegel, E. Perry: “Methane Occurrence and Water-quality Characteristics Found in Groundwater of the Appalachian Basin”

L. Steffy: “An Evaluation of Macroinvertebrate Assemblages in the Marcellus Shale Region of the Susquehanna River Basin, 2011-2013”

T. Zhang, **R. Vidic**: “Environmental Concerns with NORM Generated by Shale Gas Extraction – Management Strategies and Health Risks”

R. Vitale, D. Gratson, S. Brower, L. Work, D. Yost, J. Smelko, L. Anderson: “Marcellus Shale Coalition, Dissolved Methane Method Study”

C. Wilderman: “Citizen Scientists Monitoring Shale Gas Impacts on Small Streams: An Analysis of Operational Models and Lessons Learned in Pennsylvania”

B. Wilson: “Geologic and Baseline Groundwater Evidence for Naturally Occurring, Shallow Source, Thermogenic Methane Gas in Northeastern Pennsylvania”