Technical Workshop Series: Call for Nominations

US EPA Study of the Potential Impacts of Hydraulic Fracturing on Drinking Water Resources

United States Environmental Protection Agency

Coming April and June 2013

What?

The final four technical workshops in a series related to EPA's study of potential impacts of hydraulic fracturing on drinking water resources will be held to discuss:

- Well Construction/Operation and Subsurface Modeling
- Wastewater Treatment and Related Modeling
- Water Acquisition Modeling: Assessing Impacts Through Modeling and Other Means
- Hydraulic Fracturing Case Studies

Why?

Workshop discussions will inform EPA on focused subjects integral to hydraulic fracturing to enhance the overall study, increase collaborative opportunities and inform additional possible future research.

How?

Invited presentations by subject-matter experts followed by discussion on focused topics.

Nominations for Subject-Matter Experts

Deadline for April Workshops Extended to: March 1, 2013
Deadline for June Workshops Extended to: March 15, 2013

EPA is seeking subject-matter experts to participate in a series of technical workshops for the Hydraulic Fracturing Study. Experts will contribute to the workshops by providing technical knowledge during workshop discussions and through selected invited presentations.

Because meeting space is limited, EPA will select ~40-50 experts with significant relevant and current technical experience per workshop. Several experts will be invited to present research technical information, and all participants will contribute to technical discussion throughout the workshop. These selections will be made with the goal of maintaining balanced viewpoints from various stakeholder groups including industry, non-governmental organizations, other federal, state and local governments, tribes and the academic community.

Experts wishing to participate in any of these technical workshops should apply at Technical Workshop Series before the deadline. If you would like to contribute a presentation, please provide an abstract. EPA plans to notify selected experts in mid-March and mid-April 2013, respectively.

DATES & LOCATIONS

Well Construction/Operation and Subsurface Modeling
April 16-17, 2013
EPA-RTP Campus Main Building Auditorium (Research Triangle Park, NC)

Wastewater Treatment and Related Modeling
April 18, 2013
EPA-RTP Campus Main Building Auditorium (Research Triangle Park, NC)

Water Acquisition Modeling: Assessing Impacts Through Modeling and Other Means
June 4, 2013
EPA Conference Center at One Potomac Yards (Arlington, VA)

Hydraulic Fracturing Case Studies
June 5, 2013
EPA Conference Center at One Potomac Yards (Arlington, VA)

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WORKSHOP THEMES

Well Construction/Operation and Subsurface Modeling

Well Design, Construction and Operation: *What current design techniques prevent leaks through production well tubulars and fluid movement along the wellbore? What testing is conducted to verify these issues do not exist prior to, during and after hydraulic fracturing? What factors are typically used to ensure adequate confinement of fluids that can move, and what testing or monitoring techniques ensure adequate confinement? How are ground water resources identified and documented prior to and during production well installation? What is the breadth of approaches?*

Subsurface Modeling of Fluid Migration to Identify and Understand Potential Impact on Aquifers: *What additional potential failure scenarios not covered in the EPA study progress report should be investigated? What are the most important parameters and appropriate level of complexity for a model that studies the severity of the potential impact of hydraulic fracturing on drinking water resources? What are the advantages and disadvantages of different modeling approaches? What well performance data (e.g., microseismic testing, pressure, tracer or other) are available to EPA that would be useful to build and evaluate the model?*

Water Acquisition Modeling: Assessing Impacts Through Modeling & Other Means

Trends and Implications of Water Recycling/Reuse for Hydraulic Fracturing Operations: *What is the current state of industry practice with respect to recycling/reusing water for hydraulic fracturing operations? What are the long-term lifecycle implications and regional trends of recycling/reusing water in hydraulic fracturing operations?*

Analysis of Existing Data on Water Acquisition: *What existing sources of data could be used to better understand the effects of hydraulic fracturing water acquisition on water system availability? What are key attributes of a scientifically robust approach to measuring and monitoring hydraulic fracturing water use and disposition?*

Generalized Approach to Modeling Effects of Hydraulic Fracturing Water Acquisition on Water Availability: *What would a more generalized, conceptual model look like for assessing hydraulic fracturing impacts in different areas of the US and at different scales? What factors should be included in a generalized model?*

Wastewater Treatment and Related Modeling

Fate/Transport of Hydraulic Fracturing Constituents in the Environment: *What are the contributions of selected contaminants from hydraulic fracturing relative to other potential sources? What are some applications of surface and subsurface modeling?*

Hydraulic Fracturing Wastewater Treatment: *What are some modern and potential future trends in reuse, recycling and zero-liquid discharge? How to manage, dispose and characterize residuals of hydraulic fracturing?*

Current and Future Trends in Hydraulic Fracturing Wastewater Management: *How much flowback and produced water is created, and how is it managed? How does industry currently monitor wastewater disposition? How do the projected volumes of wastewater compare to wastewater management capacity, including underground injection disposal wells and treatment systems? What are the regional differences in wastewater quantity and quality and potential impacts on drinking water sources?*

Hydraulic Fracturing Case Studies

EPA Hydraulic Fracturing Case Studies: *What are the current EPA research efforts? What methods and approaches are being used for data collection and analysis? Are any additional case studies planned?*

Evaluation and Interpretation of Inorganic, Organic and Gas Data for Source Attribution: *What are the transport and fate mechanisms of common organic compounds in hydraulic fracturing fluids and their transformation products in ground water? What are the potential impacts and mechanisms of release of stray gas? How can stray gas be distinguished from background gas? What are the transport and fate mechanisms of inorganic compounds in hydraulic fracturing fluids and produced/ flowback water in ground water, and how can they be distinguished from naturally-occurring inorganic compounds?*

Data Gaps and Future Considerations: *What are the largest data gaps and issues that should be investigated in future case studies?*