

EPA Federal Partner Consultation on the Hydraulic Fracturing Study

Monday, June 7, 2010

Meeting Summary

US EPA hosted a meeting and webinar with Federal partners on June 7, 2010, to seek input on its proposed plan to study the relationship between hydraulic fracturing and drinking water. The EPA Federal Partner meeting was attended by EPA employees from the Office of Research and Development, Office of Water, and Regional offices. Federal partners in attendance represented Bureau of Land Management, US Geological Survey, US Fish & Wildlife Service, US Forestry Service, US Department of Energy, US Army Corps of Engineers, and the National Park Service.

Meeting Purpose

The purpose of the webcast is to engage in outreach with EPA's federal partners on the 2010 Hydraulic Fracturing Study design and stakeholder involvement. EPA presented the following information to attendees:

- Provided an overview of the context for the study and approach to developing the study design
- Described the potential components of the study
- Identified the types of information and data that stakeholders can provide
- Provided a summary of the April 2010 Science Advisory Board (SAB) Consultation
- Described the stakeholder process, and
- Solicited input and feedback from participants.

Discussion Summary

Scope of Study

- EPA is still determining what role the Science Advisory Board (SAB) will play in the study with regard to the peer review process and other activities. Depending on SAB's role, EPA may augment the SAB's Environmental Engineering Committee (EEC) with representatives from disciplines that were not represented or underrepresented in the original committee.
- For this study, EPA will use Underground Injection Control (UIC) program's regulatory definition of an underground source of drinking water (USDW). Per the UIC definition, a USDW has a total dissolved solids (TDS) concentration of 10,000 mg/L (or parts per million) or less. During the public comment periods of various rulemakings, EPA has received a number of comments recommending that the TDS level of USDWs be raised, which is a consideration EPA will keep in mind. There is no equivalent threshold for surface water, though EPA recognizes that surface water is often under the direct influence of ground water.

- DOE offered to assist EPA with a cost-benefit analysis, to include in the draft research plan.
- EPA is planning to conduct research in-house, as well as in cooperation with other agencies and the academic community.

Research Focus and Prioritization

- EPA will review the current literature and state of the science and identify data gaps to assist in identification of candidate topics for study. EPA will then prioritize areas of research.
- One of the possible objectives of the study is to investigate the extent of fracture activity in different shale plays, evaluating the original conditions in the context of increased fracturing activities and identifying where fractures would occur vertically.
- The EPA study may account for tectonic setting and *in situ* stress. Some attendees suggested EPA should consider the role of stress in controlling fracture permeability, as well as induced seismicity.
- The study will consider both surface and subsurface water quality issues, though. EPA will consider including processed water/wastewater in holding ponds, and will also consider the role of algae.
- EPA is currently envisioning a one- to three-year initial study, though this depends on the available resources.. These short-term activities may lead to more long-term work. At this point, EPA also hopes to award some support for extramural research which may be on a 3-5 year time frame
- There will be an opportunity for the public to submit data during the public data collection process. All data collected for the study will be subject to quality assurance/quality control (QA/QC) requirements.
- EPA will consider the issue of future water demand, though water quality concerns may be higher priority than water quantity concerns. The U.S. Army Corps of Engineers and state agencies may have information on water demand projections.

Case Study Selection

- One of EPA's criteria for site selection will be the geologic setting and access. EPA HQ will work with the EPA Regions to assess the geographic and geologic diversity of possible locations. The case studies may consider several geologic settings.
- EPA welcomes any input on the screening criteria for site selection. EPA is developing a short document on site selection criteria that will be distributed at the public meetings.

Stakeholder Process

- All federal agencies are welcome to attend the public meetings. EPA has no current plans to issue formal invitations. If a formal invitation is necessary for agency representatives to attend, EPA can develop one.
- If it is decided to include other federal agencies with speaking roles at the stakeholder meetings, EPA would coordinate with the agencies to determine the details. In this case

EPA would like to identify key individuals at other agencies who would be able to participate in the stakeholder process.

- Attendees asked how industry may participate in the study. Industry representatives may attend and participate in the public meetings. The peer review panel may include industry representatives. EPA is hoping to collect data from industry groups and collaborate with them on the case studies and field investigations..
- EPA will coordinate directly with Alabama, one of the few states that regulate hydraulic fracturing, and other interested state agencies to gain input on the study plans and obtain data from any relevant state studies.
- EPA is currently developing a Web site where stakeholders can view and upload comments.
- Congress' request for a study in late 2009 included a suggestion that EPA work with Federal and State partners. EPA may form an interagency subcommittee of experts that will serve as an advisory board for the study. EPA is interested in gauging interest on this idea and encouraged agencies to nominate point people who could participate.
- The primary purpose of the public meetings will for EPA to receive input on study priorities. Priorities will depend on a number of factors, including the level of available data at potential case study sites.
- An attendee mentioned Conoco-Philips, which has hydraulic fracturing operations in the Colorado Basin, was interested in participating in the study. EPA is still developing the data collection strategy for coordinating data collected from industry. An attendee mentioned BLM may have more options of collecting data from industry and may use the National Environmental Policy Act (NEPA) as a tool to collect information about operations on federal land.
- Some attendees suggested it may be useful to engage industry partners individually so that companies do not need to provide information in front of their competitors.
- EPA asked if representatives from the other federal agencies would be interested in attending the public meetings. BLM would likely send representatives to the Colorado, New York, and Pennsylvania meetings. DOE will attend some if not all of the meetings.
- Participants may contact Jill Dean (dean.jill@epa.gov) with questions on the stakeholder process, and Jeanne Briskin (briskin.jeanne@epa.gov) for questions regarding the study.

Ongoing and Existing Research

- EPA is seeking to develop an inventory of relevant studies going on across all federal agencies.
- USGS and NPS have developed a proposal to investigate baseline water quality in wells in the Marcellus Shale. The proposal was submitted to a USGS/NPS partnership program, and both agencies would be interested in EPA funding assistance. EPA has limited funds, but is enthusiastic about collaboration among agencies. Descriptions of ongoing studies and data may be sent to Jeanne Briskin at briskin.jeanne@epa.gov. EPA will also publish a *Federal Register* notice to solicit data. EPA hopes to compile an inventory of relevant studies carried out by all federal agencies.
- Some attendees suggested contacting a group of students in Pennsylvania who have been trained and are monitoring water quality in streams; their data may be useful to the study.
- USGS and DOE's Geothermal Technologies Program have conducted research in tectonic setting and in situ stress; there should be opportunities for collaboration with EPA.