

US EPA Hydraulic Fracturing Study
Consultation with Haudenosaunee Environmental Task Force (HETF)
August 13, 2010

Meeting Summary

US EPA (hereafter referred to as EPA) announced plans to initiate a study on the potential relationship between hydraulic fracturing used for natural gas extraction and drinking water in March 2010. Several webinars and public meetings are planned to involve stakeholders in the study development process. As part of the stakeholder process, a consultation with the Haudenosaunee Environmental Task Force (HETF) was held in Syracuse, New York, on August 13, 2010. The meeting began with brief presentations by EPA on proposed study scope and the stakeholder process followed by discussion between EPA and attendees. EPA staff from the Office of Research and Development, Office of Water and Regional Offices participated, and 20 guests representing the Onondaga, Mohawk, Tuscarora, Cayuga, and Tonawanda Seneca Nations attended the meeting.

Meeting participants suggested a number of technical topics that EPA could include in the study, such as air quality, well construction, treatment of wastewaters, and appropriate surface storage for fluids and wastes. Attendees were particularly concerned about sustainable water use, identifying nearby improperly abandoned wells, preservation of natural and cultural resources and homeowners' protection from predatory mineral leasing practices. The Onondaga representatives described their experiences with subsurface mining and impacts to Onondaga Lake and Onondaga Creek. Participants expressed a desire for the study to include all phases and aspects of the hydraulic fracturing process. Case study locations were proposed by attendees in the Great Lakes region, Bradford, Pennsylvania, and in areas with reported incidents. In response to participants' questions, EPA explained and clarified details of the study's scope, focus, and logistics.

The following is a summary of the discussion between EPA and meeting attendees regarding the EPA Hydraulic Fracturing Study. The information is organized by discussion theme. Bulleted statements under each theme represent the responses to the questions and comments posed to EPA and suggestions for the Hydraulic Fracturing Study.

EPA's Hydraulic Fracturing Study

- EPA Region 2 is committed to a government-to-government consultation process. EPA has been directed by Congress to investigate the environmental impact of HF, particularly on drinking water. EPA is watching the areas where drilling has already started.
- EPA genuinely wants to hear from the public regarding concerns, data gaps, suggestions for case studies, and any other questions.
- Additional comments can be sent by post to Washington, D.C. or by e-mail hydraulic.fracturing@epa.gov.
- EPA wants to explore how the study can take advantage of the experience and knowledge of the Onondaga Nation and HETF.

- While the study will take time to complete, EPA will immediately report any findings that suggest imminent danger to communities and drinking water supplies.
- EPA has committed almost \$2 million for the first year of the study, and asked for an additional \$2.4 million for 2011. However, this money is dwarfed by the challenges faced and the costs of case studies. To better prioritize, EPA is asking stakeholders for suggestions.
- EPA plans to take a lifecycle approach. The SAB indicated that this is the right approach; however, due to limited time and a limited budget, EPA will need to prioritize some areas.
- EPA plans to collect as much information as possible. EPA is conducting a literature search, and also welcomes suggestions for other sources of information.
- EPA will hold one more public meeting. Individuals can register to give oral comments, and/or submit written comments by post or e-mail.
- The study will consider water use and water supply.
- The study will not just address drilling, but everything associated with HF.
- EPA is interested in receiving suggestions for case studies.
- EPA is extremely impressed by HETF's map [see attached] and will use it to help inform the study.

Onondaga Nation/HETF Concerns Regarding HF

Position on HF

- The Onondaga Nation and HETF are absolutely against HF. The Haudenosaunee held a Grand Council in Onondaga to discuss HF. The nations reached a consensus almost immediately, which is rare. A letter was drafted and sent to President Obama [see attached]. HF has an impact on peace, the environment, and future generations.
- Gas is not a bridge fuel. The drilling engine, compressors, pumps, and trucks have a carbon footprint that cannot be ignored. Additionally, methane leakage at every stage of the industry is a significant factor, as methane is at least 20 times worse for global warming than carbon dioxide emissions.
- HF has an impact on the rural environment and on trees, both from land clearing and the effect of HF fluids that run off the drill pad. HF is already impacting the natural world and wildlife, including raccoons, trees, and migratory birds.
- Exemptions in the state and federal regulations need to stop. Full transparency and a full review are necessary, as well as communication between regulating agencies.
- The Onondaga Nation has learned the hard way about the impact of subsurface mining. The Tully Valley had solution salt mining for 100 years, which created a tremendous mess around Onondaga Lake, including rock fractures, sinkholes, and mud boils.
- The HETF recommended that NYDEC put its efforts into other energy sources, and protect the interests of water, because water is too precious to take chances with.
- Since the United States has the largest carbon footprint, its change can be the biggest change: this is a great opportunity for leadership. With the current administration, now is the time for action. As a federal agency, EPA has a golden opportunity to make change.

- The Onondaga Nation and HETF urge EPA for their help, and to be specific with the requests. There is a lot of positive effort here and people are ready to support EPA.
- Native Americans have experienced this before, with uranium in the Southwest and oil in other areas of the country. These activities have lasting effects on communities and the environment.
- The Haudenosaunee believe that what is buried in the ground should stay buried, or there will be severe consequences. Whether it is the carbon dioxide released into the atmosphere from burning natural gas at the end of the process, or the carbon dioxide released by trucks at the beginning, people are releasing something that should be under their feet.
- The Haudenosaunee define sustainability as using what is given. For example, renewable energy sources like wind, solar, and biomass are given to people by the sun.
- The public needs to be heard. HETF may be able to help EPA find a meeting location.
- The constituency of the Haudenosaunee is very large: the natural world. In addition, the Haudenosaunee have a mandate to protect the interest of seven generations in the future – seven full lifetimes. HETF can help EPA by providing support and organizing a broader perspective.

Water Issues

- Onondaga territory is surrounded by people who are leasing. The HETF developed a map showing the gas leases within one mile of the Onondaga Nation [see attached]. The Onondaga Nation used its own money to install a clean drinking water system fed by springs, but nearby leases will jeopardize the springs' watersheds. The Onondaga Nation is not concerned only about areas within its territorial lines, but also the whole area and all the people living in the area.
- The HF chemicals need to be disclosed to the people who live nearby, as well as to first responders. Horizontal HF requires millions and millions of gallons of water, much more than for vertical drilling, and this leads to the use of large volumes of chemicals.
- In Pennsylvania, people are already struggling with wastewater issues. Millions of gallons of drilling wastewater are produced each day, but the first treatment plant will not go online until 2013.
- HF fluid cannot be safely stored in open pits lined with plastic. Tanks are required.
- Unknown natural faults pose a risk.
- The Great Lakes and the Great Lakes watershed has almost a third of all the fresh water in the world. It is the responsibility of the people who have that in their backyard to protect it. EPA's study should consider the Great Lakes region.
- People cannot afford to lower the level of aquifers or take water out of streams and lakes. A pipeline was recently approved to bring water from Lake Erie into Pennsylvania for HF.
- HF has impacted water resources in places like Russia, Montana, Texas, and Utah. EPA should investigate these incidents.
- New York's supplemental generic environmental impact statement (SGEIS) does not address private drinking water wells. Drilling cannot be allowed on sole source aquifers.
- Affected residents of Bradford, Pennsylvania are interested in hosting a case study. There is HF there, though it is not in the Marcellus Shale.

- There need to be two plans: a plan to drill, and a plan to replace any water supplies that are affected.
- People are applying for massive water withdrawal permits in New York State: one million gallons per day out of the headwaters of the Susquehanna River. There are huge areas with no regulations on withdrawals. This study requires time, and time requires a moratorium. States cannot be depended upon to pass moratoriums; it needs to be a national effort.
- Onondaga Creek used to be clear enough that people could spear fish in it by lantern light. Now it looks like chocolate, due to the extraction industry.

Infrastructure and Public Safety

- Schlumberger admits that cement fails; it leaks. This is also apparent in central New York. At the same time, industry says that cementing is the major safety that will protect aquifers.
- Transportation of gas through pipelines is dangerous. Pipes can corrode and explode. There have been accidents in Virginia, Pennsylvania, Louisiana, West Virginia, and other places.
- There are abandoned oil and gas wells that cannot be located. This is a major threat to public health when combined with new drilling, as well as a fire and explosion risk.
- The United States is facing an infrastructure crisis. Drilling will bring a large amount of infrastructure to this area (such as pipes and drill pads) and it will fail in 50 to 60 years. Wells will fail, and the natural gas will come to the surface.

Cultural Resource Protection

- One specific concern is the inability to protect sacred sites and ancestors' graves in New York State.
- Historic village and burial sites will be impacted by HF and the disposal of fracturing fluids.
- NYDEC's use of a GEIS, rather than full project review using New York State Environmental Quality Review Act (SEQRA) procedures with notice to the New York State Historic Preservation Office and the Nations should be abandoned. This process is too risky not to have full state environmental review and full notice to all interested parties, with public hearing for every well application.

Energy Issues

- EPA should consider both the need for this energy and the consequences of obtaining it.
- Each one of us uses a gallon of oil per day, on average, for things like heating, electricity, transportation, and clothing. Generally speaking, a quart of oil is used for each dollar spent in the U.S. economy.
- There are four general categories or steps for energy:
 1. Production. Fossil fuels formed millions of years ago through the earth's processes, and this will probably never happen again on the scale that it did.
 2. Extraction, and turning the materials into something useful.
 3. Transportation.
 4. Consumption. For the most part, natural gas will be consumed as electricity, though small sources will be used directly for transportation.

- The U.S. should consider the net energy value of the four steps. People invest time and energy to extract materials that may not even give a return on investment.
- Economic analyses and models generally include a discount rate. The Haudenosaunee do not use this. On the contrary, the Haudenosaunee believe that things will be more valuable in the future. People are not actually willing to discount their families, friends, and the things they value.

Other Concerns

- The Marcellus Shale is often the only formation people talk about. However, there are other formations, such as the Utica Shale, that could be drilled for gas. Only referring to the Marcellus Shale is disarming and causes confusion.
- Fraud is committed when people sign leases. Gas companies say people can make a six-figure income, and they hoodwink people into signing leases. There are desperate financial straits in upstate New York and in Pennsylvania. Most people who sign leases do not understand what will happen. The Haudenosaunee have advocated for a landowners bill of rights.
- HF also causes air pollution from rock dust and volatile organic compounds (VOCs).
- This problem is caused by subsidies. The Haudenosaunee recommend that federal subsidies to industries be rethought. Subsidies currently go into exploration; they could be given to renewable energy instead.
- The extraction industries are predatory. They have no loyalty to nations or countries – they are corporate states. Industry should prove that activities are safe before they are put in place, not after.
- In Pennsylvania, people are trapped in the drilling areas – they used to have beautiful rural homes, but now they have no way out. Pennsylvania is tired of being the guinea pig for the industry.
- People say there is no democracy where the Marcellus Shale is. There are serious constitutional issues at stake. Politicians say that they cannot do anything, and DEP does not return phone calls.
- The U.S. majority is very ill informed or uninformed about these subjects. The ones who are informed are the ones who have experienced the impacts.

Regulatory Issues

- There has been no waiver of mineral rights in any treaty the Haudenosaunee have made with the United States. However, if these leases go forward, there will be drilling under the territory of the Onondaga Nation.
- In New York, the Department of Environmental Conservation (NYDEC) maintains most responsibility for oil and gas activities. EPA will be working with NYDEC to ensure that if drilling proceeds it is done in the most environmentally responsible way possible.
- Underground injection wells are regulated by EPA, but HF wells are not.
- The “Cheney Loophole” must be closed. States do not have enough money to oversee industry. In this country, the only way to control industry is through legislation.
- EPA recognizes that there is a distinction between the science in this study and the government policy offices. EPA is limited by the authorities given to it by Congress.

However, EPA will communicate the points from today's discussion to others who are in a decision-making position.

- Under SDWA, states may apply to EPA for the authority to run their water programs, but there are limitations. If states don't manage their programs to meet the minimum standards in SDWA, EPA can withdraw their authority. The moratorium on drilling in the New York City watershed came from NYDEC.
- Agencies like NYDEC have a three-way conflict. NYDEC has a mandate to promote the development of this resource. However, it is also supposed to regulate the resource. The third conflict is the leasing of state forest land.
- EPA is not in a legal position to ban HF. Natural gas extracting, including HF, is currently legal in the United States. EPA and state agencies can deny permits if the activities will damage a natural resource, but it would be disingenuous to say that all permits could be denied. A national moratorium would take an act of Congress or a state law. County ordinances, for example, would be preempted by state law.