EPA Tribal Consultation Webinar on Hydraulic Fracturing Using Diesel Fuels
Monday, June 25, 2012

Meeting Summary

U.S. EPA Headquarters (HQ) and Regional Attendees

Ron Bergman (EPA HQ)	Robin Danesi (HQ, OWM)	Jennifer Manville (EPA R5)
Kyle Carey (EPA HQ)	Marilyn Ginsberg (EPA HQ)	John Noël (Fellow, Oak Ridge Institute for Science and Education/EPA HQ)
Beth Cavalier (EPA HQ)	Sanda Howland (EPA OECA)	Cindy Roberts (EPA HQ, ORD)
Ann Codrington (EPA HQ)	Dan Jackson (Region 8)	Clarke Thurmon (EPA HQ, OECA)
Sherri Comerford (EPA HQ)	Jeff Jollie (EPA HQ)	Felicia Wright (EPA HQ, OW)
Dan Cozza (EPA R5)	Chitra Kumar (EPA HQ)	Kate Wright (EPA OECA)

EPA HQ attendees represented the Office of Ground Water and Drinking Water, unless noted otherwise.
OECA = Office of Enforcement and Compliance Assurance.
ORD = Office of Research and Development.
OW = Office of Water.
OWM = Office of Wastewater Management.

Tribal and Organization Attendees

Please note that this list is not necessarily comprehensive. Participants may have had multiple attendees on the phone with them who were not identified during the webcast. Some webinar participants did not provide their organizational affiliation.

Navajo Nation EPA	Kialegee Tribal Town Environmental	Shoshone-Bannock Tribes
Seminole Nation of Oklahoma Environmental Protection Office	Nina Hapner	Leech Lake Band of Ojibwe
Alaska Inter-Tribal Council	Kialegee Tribal Town Environmental	Iowa Tribe of Oklahoma
Little Traverse Bay Bands of Odawa Indians	United Keetoowah Band of Cherokee Indians in Oklahoma	National Tribal Air Association
Staff member, US Senator Kent Conrad	Saginaw Chippewa Indian Tribe	Four attendees chose not to disclose their affiliations
Hoopa Valley Tribe	Turtle Mountain Natural Resources/Agriculture	

Introductory Presentations

Ronald Bergman (EPA) presented basic information on EPA's authorities pertaining to hydraulic fracturing (HF) under the Safe Drinking Water Act (SDWA) and where hydraulic fracturing using diesel fuels fits into EPA's Underground Injection Control (UIC) program. Under the SDWA, the UIC Program is mandated to prevent the contamination of underground sources of drinking water (USDWs) through migration from injection wells. While most HF activities are excluded from SDWA under the Energy Policy Act of 2005, HF using diesel fuels is not and is subject to SDWA requirements. EPA has developed draft permitting guidance for HF using diesel fuels. The guidance aims to clarify existing UIC Class II regulations, providing recommendations for permit writers so that permitting of HF activities using diesel fuels provides the required protection of USDWs.

Bergman explained that EPA is focusing on Class II because it is the category designated for oil and gas activities. He said that diesel fuels in hydraulic fracturing are a concern because often diesel fuels include benzene, toluene, ethylbenzene, and xylene (BTEX) compounds. BTEX compounds are highly mobile in ground water and are regulated under the national primary drinking water regulations. Consuming BTEX compounds over long periods of time poses serious risks to human health, such as an increase in anemia, increased cancer risk, and damage to the nervous system, kidneys and liver.

Bergman described EPA's draft guidance, including a proposal to use six Chemical Abstracts Service (CAS) numbers; options to permit multiple wells from the same owner or operator through area permits; modification of the ¼-mile fixed-radius approach to delineating the Area of Review to address directional/horizontal wells; options to deal with the shorter duration of HF in relation to the permit duration; various recommendations to build on existing regulations for well construction, operations, and monitoring; and options for meeting the public notification requirements.

Bergman explained the process by which the draft guidance would be reviewed and implemented, and highlighted the opportunity for members of the public to submit comments during the 60-day public comment period [subsequently extended by 45 days]. In addition, information about educational resources and contact information for EPA regional representatives can be found in the presentation.

Webinar Discussion Summary

Webinar participants asked a number of questions about the draft guidelines and other related topics and provided preliminary comments. Questions and comments from participants have been organized thematically, with the specific questions on which EPA has requested comment presented first. *Responses from EPA officials are included in italics.*

Diesel fuels description
There were no questions or comments from webinar participants focused on this topic.

Diesel fuels usage information
A webinar participant asked whether HF using diesel is more cost-effective than HF using acid. *EPA officials responded that this determination would need to be made by the operator based on*

the specifics of the rock formation in which the fracturing would be conducted.

A participant inquired about what depths HF using diesel would take place. *An agency official responded that HF, and HF using diesel fuels, could be conducted at any depth.*

A webinar participant provided the following general comment: "There are an allegedly 32 million gallons of diesel/mix that has been used for fracking in the past (congressional report/testimony). Part of the proposed future permit fees for the UIC permit program need to be allocated for future research/cleanup issues on federal/tribal land. There is currently no way to track where/when the previous use of diesel has occurred."

A participant asked whether any ground water contamination has occurred due to the use of diesel oil in hydraulic fracturing on federal lands in Colorado. *EPA officials responded that they have not yet received any reports of diesel fuels HF causing ground water contamination there. In addition, EPA officials told participants that they are looking for any data that helps us understand how diesel fuels are being used in HF, where they are being used, and alternatives to the use of diesel fuels in HF.*

Permit duration and well closure
There were no questions or comments from webinar participants focused on this topic.

Area of Review
A webinar participant stated that he has heard from a number of tribes that the ¼-mile Area of Review approach specified in the Class II regulations would be inadequate and that direct consultation with tribes for drilling near tribal land would be needed. *An EPA official thanked the participant for his input and asked him to also submit his comments to the docket.*

A commenter articulated her recommendation that the Area of Review be expanded beyond ¼ of a mile.

The permit review process
A webinar participant asked about the considerations that the permitting agency would take into account when reviewing permit applications. *An EPA official responded that the criteria are specified in the UIC regulations with additional detail specified in both the draft Guidance and in the Code of Federal Regulations. The criteria include considerations such as: site characterization, specific details that will need to be submitted about the site, and contact information for local land owners that will need to be notified under public notification guidelines within the Area of Review. Permit applications would be reviewed for both completeness and for substance. The permit writer could also include recommendations to ensure against contamination of USDWs.*

A participant inquired as to how long the permit review process will take. *EPA officials said that, although they cannot answer definitively because they have not yet received any permit applications to date, generally the processing of permits for Class II wells takes approximately three or four months, depending on how much information is needed. This time period is followed by a thirty-day public comment period, after which a decision on the permit application*

is made. An EPA official added that the EPA is seeking to streamline this process and is open to suggestions on how to do so.

A webinar participant asked whether direct consultation by the EPA with tribes for permit applications near tribal land is included in the public notice process. *An EPA official responded that, although the UIC program does not generally include direct consultation with tribes, the federal regulations are intended to serve as a baseline and an EPA Region or other implementing authority could choose to supplement federal regulations by directly consulting with a tribe.*

Monitoring

A webinar participant asked about mechanisms that are in place to verify that no damage to well casing occurs due to the high pressures involved with hydraulic fracturing, particularly between fracturing stages. *EPA officials responded that they use mechanical integrity testing to verify well integrity and that EPA is recommending that mechanical integrity testing be conducted both before and after fracturing is performed. In addition, pressure testing would be conducted continually throughout the fracturing and extraction process to verify that no failures in well integrity had occurred.* The participant also asked up to what depths well plugs would be placed when conducting mechanical integrity testing and whether any federal or state regulators would be on site at drilling sites to verify that pressure testing is being done properly. *EPA officials responded that the depth of well plugs would depend on local geology and, while regulators do witness some tests, that EPA could not provide assurance that a federal or state regulator would be present at every well site to verify proper testing by operators.*

Other topics

A webinar participant asked about hydraulic fracturing that is being proposed for Cook Inlet, Alaska and expressed her concern that the ¼-mile Area of Review would allow for the spread of fracturing fluids in the Inlet and would damage the habitat of beluga whales. In addition, she noted that local tribes are asking why salmon have not returned in strength and one possible reason being that drilling muds, containing chemicals, are being dumped into the Inlet. *EPA officials responded that, while they could not comment on the specific situation in Cook Inlet, UIC Class II regulations are designed to provide for safe drilling in cases where diesel fuel is involved in drilling. Following Class II regulations should ensure that diesel fuel would not enter Inlet waters. EPA officials also noted that EPA's responsibility is to give primacy to states and tribes and to ensure that certain aspects of drilling, such as injection using diesel fuel, are conducted safely. The conversations and decisions about whether and where drilling takes place occur at the local and state levels.*

A participant inquired as to whether the Endangered Species Act would be considered when a permit for drilling is being reviewed. *EPA officials responded that, if the well is regulated under the UIC program, then the public participation requirements for the UIC program and for the Endangered Species Act are similar, and so complying with the UIC requirements would fulfill requirements under the Endangered Species Act. If the well is regulated under other federal programs, as the wells are in Cook Inlet, then the Endangered Species Act could apply.*

A webinar participant asked how much water is required to hydraulically fracture a well. *An EPA*

official responded that, for a deep shale well, between two million and six million gallons of water are typically required, as compared to one million gallons of water for a conventional natural gas well.

A participant noted that various tribes have spoken to him about spillage of sludge and chemicals from pipes that are being removed once the process of extracting oil and gas has been completed. He proceeded to ask whether there would be any EPA provisions for cleaning up this spillage. *EPA officials explained that any spillage resulting from production of oil and gas would be regulated by the entity with primacy (generally the state), although if spillage results from underground injection, then EPA would be responsible. EPA officials indicated that they would have to conduct research to determine the mechanism that would regulate spillage from production pipes and who the appropriate point of contact would be.* Another participant asked about similar jurisdictional issues for abandoned pipelines on the floor of Cook Inlet and *EPA officials stated that they would need to research this question before providing an answer.*

A participant asked whether permits will be written only at the federal level by EPA or whether they would also be written by states and other bodies that have primacy for SDWA enforcement. *An EPA official answered that this would depend on the specific jurisdiction: most states hold primacy for SDWA enforcement, and in these states, the permit would be written by the state. In those states that do not hold primacy, EPA would be the permitting authority. EPA also holds primacy in tribal areas, except for the Fort Peck and Navajo reservations.*

A webinar participant asked about how Class II regulations apply to existing wells. *An EPA official responded that the proposed guidance covers this issue in detail, but generally the same construction requirements apply to new and existing wells. Existing wells can conduct certain tests to demonstrate that they do not pose a threat to USDWs.*

<u>Closing</u>
EPA officials thanked webinar participants for their questions and input and requested that tribes submit formal consultation comments in writing by July 9. [The comment period was subsequently extended to August 23.]