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From: Overbay, Michael <overbay.michael@epa.gov>
Sent: Wednesday, September 17, 2014 2:17 PM
To: rulescoordinator
Subject: Proposed amendments to Sections 3.9 and 3.46 to incorporate requirements related to seismic events for disposal wells
Attachments: Honker letter to RRC on proposed earthquake regs 9 7 14.pdf

Attached please find a copy of comments from the U.S. Environmental Protection Agency (EPA) on the proposed amended rules. These comments were submitted by letter from Mr. William Honker, P.E., Director, Water Quality Protection Division, Region 6, to Mr. Gil Bujano, P.E., Director, Oil and Gas Division, Railroad Commission of Texas, on September 7, 2014.

Regards,

Michael Overbay, P.G.
Regional Ground Water Center Coordinator
US Environmental Protection Agency, Region 6
(214)665-6482



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS TX 75202-2733

SEP 10 2014

Mr. Gil Bujano, P.E., Director
Oil and Gas Division
Railroad Commission of Texas
P.O. Box 12967
Austin, TX 78711-2967

Re: Proposed revisions of the Texas UIC regulations

Dear Mr. Bujano:

On Monday, August 18, 2014, I and Mr. James Brown, P.G., Acting Associate Director for the Source Water Protection Branch, met with Mr. Milton Rister, Executive Director of the Railroad Commission of Texas (RRC), yourself and other RRC staff at the your offices in Austin. Among the topics discussed was the RRC's recent announcement of proposed regulations that would allow the Commission to respond to known or suspected induced seismicity events related to Class II injection wells used for oil and gas waste disposal. As I committed at that time, my staff reviewed the proposed regulations and this letter offers comments for the RRC to consider as they move forward with finalizing these changes to the Texas Administrative Code.

The proposed regulations were reviewed by multiple Ground Water/Underground Injection Control program engineers and scientists. All applauded the RRC's efforts to ensure it has sufficient regulatory authority to respond to any event of this type where concerns may arise. However, our review did identify a few questions or topics for the RRC to consider.

The proposed regulations require the permit applicant to calculate the estimated location of a 5 pounds per square inch (psi) pressure front boundary after 10 years of injection. This would be used to define the area to be reviewed for information on seismic events on the US Geological Service (USGS) website as part of the application process. While the preamble indicates this estimation is to be calculated using injection at the maximum requested permit injection volume, this is not stated in the proposed regulations. The RRC should consider adding that requirement into their revisions of §3.9.3 (B) and §3.46.(b)(1)(C).

Our review also identified a potential concern that the type of information necessary to conduct this estimation may not be readily available. It is difficult to reliably estimate the pressure front without: (1) an in situ measurement of transmissibility (generally a falloff test); and (2) a static pressure measurement. In areas where new oil and gas activity creates the need for new disposal wells, this type of information may not be well documented. If the pressure front is not realistically estimated, the search area for seismic events might be very small and, given the uncertainties in the USGS event locations (i.e., +/- 10 miles) this approach would be of limited utility. The RRC may wish to consider whether more detail needs to be provided on how to conduct this estimation. One approach the RRC could consider is establishing a minimum

distance to be reviewed (e.g., 10 miles) which the applicant could opt to use if the formation information is not readily available. Another issue affecting this calculation is how to incorporate the effects of multiple injectors in an area, such as is occurring in East Texas.

Finally, the proposed regulations use the terminology, "increase the risk that fluids will not be confined to the injection interval." As you know, the transmission of pressure in the subsurface due to the injection of fluids affects a much greater area than the actual migration of the injected fluids. Our reviewers were concerned that omitting language recognizing this pressure influence (which is the primary concern in induced seismicity events) may inadvertently limit the applicability of these changes.

The RRC's proposed regulatory changes represent a step forward in allowing for an enhanced program authority to protect the citizens of Texas in those instances when injected induced seismicity is suspected, and EPA fully supports your efforts in this area. Should you or your staff have questions, please feel free to contact Mr. Michael Overbay, Ground Water Center Coordinator, at (214) 665-6482 or overbay.michael@epa.gov at any time.

Sincerely,

A handwritten signature in dark ink, appearing to read "W. Honker", is written over a light-colored background.

William Honker, P.E.

Director

Water Quality Protection Division