Texas Adopts Rules Aimed At Curbing Earthquakes

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The Texas Railroad Commission on Tuesday unanimously adopted rules for drilling injection wells aimed at curbing possible earthquakes, giving the agency the power to shut down wells determined to be contributing to seismic activity and to require drillers to submit detailed logs.

The rule amendments will be effective Nov. 17 and will require applicants for new disposal wells to search the U.S. Geological Survey seismic database for historical earthquakes within 100 square miles around a proposed well. The amendments also give agency staff the authority to modify, suspend or terminate a permit if scientific data indicates a disposal well is likely to be or is determined to be contributing to seismic activity.

The rules are intended to address the dozens of small earthquakes that hit towns around the Barnett Shale in 2013, prompting public outcry and legislative investigations into whether disposal of fluids from drilling and fracking gas wells had caused the uptick. The Railroad Commission hired a seismologist and proposed the rules in August, without making a definitive link between increased seismic events and fracking.

“These comprehensive rule amendments will allow us to further examine seismic activity in Texas and gain an understanding of how human activity may impact seismic activity, while continuing to allow for the important development of our energy resources in Texas,” Commissioner David Porter said.

Chairman Christi Craddick said the rules follow science, protect natural resources and provide a stable regulatory environment for oil and gas drillers.

The amendments also allow the staff to require more detailed information from well operators, including volumes and pressures of the well and pressure-front boundary calculations that demonstrate disposal fluids will stay confined if the well is in a high-risk area. A high-risk area is defined by the commission as having characteristics that may increase the risk that fluids won't be confined exclusively to the injection interval, including complex geology or a history of seismic events.

The adopted rules differ slightly from the August proposal, eliminating a requirement that applicants for permits submit upfront a calculation of the 10-year pressure-front boundary — the boundary of increased pressure of five pounds per square inch after 10 years of injection at the maximum requested injection volume — and use that area to determine whether there has been historic seismic activity.

In response to comments from Chevron Corp., the U.S. Environmental Protection Agency and others, the agency tweaked the requirement to be simpler and more consistent by requiring permit applicants to include a USGS report showing historical seismic events around the proposed area, it said.

After commenters said the calculation of the pressure-front boundary calculations would be complex and possibly inaccurate, the agency said it would only require the calculation if it needs more information to determine whether fluids from the well could seep out of the proposed injection site, according to a staff report.