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Comments Form for Proposed Rulemakings

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§§3.9 and 3.46: Amend to incorporate requirements related to seismic events for disposal wells

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The Railroad Commission's proposed amended rules are a welcome development. Hopefully this is the beginning of a process leading to the development of best practices for mitigating seismic risk associated with wastewater injection.

Though the proposed amendments do not seem overly onerous, I am not totally convinced of their efficacy. Short of additional details as to the scientific basis behind them, I am concerned that many of these proposed changes will have little practical effect in dealing with induced seismic activity. In particular, I have the following observations.

- The calculation of a "10-year five pounds per square inch pressure front boundary" is not a standard oilfield calculation. To perform this calculation, a number of assumptions and approximations will need to be made by operators, leading to the possibility of non-uniform results. The distances that are likely to be calculated could, at least in some cases, lead to misleading numbers that confuse the public.

- Reporting of historical earthquake activity should easily be accomplished by well operators, and may be desirable in the interest of transparency. However, this data may turn out in many cases to be of little use. Last fall's earthquake activity near Azle and Reno, for example, was in an area that had no recent history of earthquakes. This data would have failed to identify that risk.
- Some of the additional data that may be required to be reported to the Commission is highly interpretive in nature, and will thus be difficult for some operators to generate, as well as for Commission staff to assess. Perhaps the most important issue here, however, is that it is unclear what the scientific basis is for this data being of use in determining seismic risk.
- After many months, more detailed injection well data was (finally) reported to the Commission for wells near the Azle/Reno earthquake activity. This data indeed shed very valuable insight into the connection between a particular well's operating conditions and earthquake activity. Had this data been available to the Commission earlier, seismic activity could have been dealt with much quicker.
- I would have thought that concerns for public safety alone would have allowed the Commission to modify a wastewater well permit without this change of rules. Clarification that this is indeed the case is welcome. I hope that the provision for hearings (which are necessary) does not preclude the possibility of emergency actions on the part of the Commission.

I propose the following changes to the proposed rules:

- Either: a) provide details for the method operators should use to consistently calculate the "10-year five pounds per square inch pressure front boundary", or b) replace the calculation with a simpler criterion (such as some reasonable fixed distance). Either way, the Commission should present the scientific basis and engineering principles involved in determining this criterion.
- Provide information as to how the Commission will use the specified "additional data" in its determinations of earthquake risk.
- Require disposal well operators to: a) report injection volumes and pressures on a monthly basis (as oil and gas production well operators are already required to do), and b) maintain daily injection rate and pressure data (which is standard industry practice). It should be further specified that the Commission may require operators to produce and make public such data at any time.
- Clarify that as a result of an emergency hearing, the Commission may require an operator to temporarily alter its injection conditions or cease injection altogether pending a more thorough assessment and additional hearings to determine a well's final disposition.
- Indicate that the Commission intends to continue to actively consider its disposal well rules by engaging in, supporting, and reviewing further scientific and engineering investigations.

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