

Subject: BMF comment on DEQ administrative rules

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Adam, Hal, et al

I write with comments on behalf of Ban Michigan Fracking concerning proposed new administrative rules, on which a hearing was held February 28.

The existing and proposed new rules and the regulatory impact statement (RIS) are here: <http://dmbinternet.state.mi.us/DMB/DTMBORR/Rules.aspx?type=dept&id=EQ>

As announced at the hearing, comments are due by today, March 16 at 5:00 pm. But as requested then and repeated here, the period should be extended by 30 days to allow more community input.

Though the transcript shows an industry advocate asked at page 22 that these rules -- which could enable EPA approval of DEQ primacy in regulation of injection wells -- be approved "the sooner the better," an environmental advocate requested just the opposite at page 34, that you "extend the comment period for another 30 days."

The matter having lingered for four years since DEQ first considered primacy in 2014, another 30 days would not prejudice industry interests. Twelve members of the public appeared to testify on February 28, six times as many as in 2014. There is a great deal more public interest now than then. The period should be extended.

BMF's own comments concern just the issue of earthquakes/seismicity. The safe drinking water act (42 USC 6A part C) makes no direct reference to seismic issues. And EPA has shown little interest in the topic since SDWA was enacted.

But it did do one thing. In 2013-14 a national technical workgroup convened a workshop, "Minimizing and managing potential impacts of injection-induced seismicity from class II disposal wells: practical approaches." The 415-page report is accessible here: <https://www.epa.gov/sites/production/files/2015-08/documents/induced-seismicity-201502.pdf>

The workgroup studied incidents and swarms in North Texas, Central Arkansas, Braxton County West Virginia, and Youngstown Ohio. Additionally an appendix discussed aseismic examples of class II disposal well activity causing long distance pressure influences.

There is no evidence DEQ has given any attention whatever to these issues. Indeed, you emphasized on February 28 that DEQ would impose no requirements beyond those already in effect under SWDA. This is wrong-headed. DEQ should do better.

The RIS notes Michigan has 1300 existing class II wells, and "the number [of new wells] is likely to increase in the future."

Academic and public interest in seismicity has grown since SWDA. See for instance "Warning bells about fracking and earthquakes growing louder", 3/1/18, reporting on a recent study of 300 hydraulically fractured wells near Fox Creek Alberta. <https://theyee.ca/News/2018/03/01/Warning-Bells-Fracking-Earthquakes-Louder/>. A modest injection 2.6 million gallons can cause an earthquake in formations containing faults. "But volume doesn't seem to have any effect on the size of an earthquake...."

In light of increasing injection and public interest, why would DEQ wall itself off from seismic issues?

Your proposed rule 802(f) would ensure that injection "will not initiate fractures through the overlying confining interval."

But even the EPA's 40 CFR 146.23(a) goes further: It would also assure that injection does not "propagate existing fractures" in the confining zone. <https://www.law.cornell.edu/cfr/text/40/146.23>

Again, under your proposed rule 801(b) the radius of the "area of review" extends only out to a ¼-mile from the hole. But

under 40 CFR 146.6 even EPA allows for a formula-based radius longer than a ¼-mile where a fixed radius would not be appropriate. <https://www.law.cornell.edu/cfr/text/40/146.6>

Jeff Ostahowski speaking for Michigan Citizens for Water Conservation (MCWC) on February 28 noted "a 4.2 [Richter] scale earthquake can affect the strata anywhere with a 200-mile -- within a 200-mile radius." (Pages 24, 25, 32-33, 36.)

True, few faults are known to exist in Michigan. But the same was said of Oklahoma until injection of oil-gas wastewater began in recent years. "New fault line discovered after 5.8 Oklahoma earthquake", 9/13/16, <http://www.kansas.com/news/nation-world/national/article101515987.html>

DEQ should propose a rule related to seismicity, and convene a new public hearing to air the issue.

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