

EPA Region III

Seneca Resources Corp. UIC Permit

Administrative Record Index

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15. Region 3 Framework for evaluating seismic potential associated with UIC Class II permit
16. National Academy of Sciences, Induced Seismicity Potential in Energy Technologies, National Academy Press (prepublication draft), 2012 , in particular Chapters 2 and 3
17. National Academy of Science powerpoint on induced seismicity and energy technologies
18. *A White Paper Summarizing a Special Session on Induced Seismicity*, Ground Water Research & Education Foundation, February 2013
19. *Preliminary Report on the Northstar1 Class II Injection Well and the Seismic Events in Youngstown, Ohio Area*, Ohio Department of Natural Resources, March 2012

20. *Final Report and Recommendations*, Workshop on Induced Seismicity Due to Fluid Injection/Production From Energy-Related Applications, Lawrence Berkeley National Laboratory, February 4, 2012
21. *Managing the seismic risk posed by wastewater disposal*, Earth, April 17, 2012.
22. Charlers Scharnberg, *Earthquake Hazard in Pennsylvania*, Pennsylvania Geological Survey, 2003.
23. *Earthquakes in Pennsylvania*, website, Pennsylvania Department of Conservation and Natural Resources
24. Seneca's June 13, 2013 letter on reservoir pressure
25. Horton, *Disposal of Hydrofracking Fluid by Injection into Subsurface Aquifers Triggers Earthquake Swarm in Central Arkansas with Potential for Damaging Earthquake*, Seismological Research Letters, Vol 83 March/April 2012, 250-260 pp.
26. Frohlich, *Two-Year Survey Comparing Earthquake Activity and Injection-Well Locations in the Barnett Shale, Texas*, Proceedings of the National Academy of Science Early Edition, 2012
27. *Where are the Fault Lines in the United States East of the Rockies*, website, United States Geological Survey, Earthquake Hazard Program
28. General Geology Open File Report 05-01.0: Basement Depth and Related Geospacial Data for Pennsylvania, Pennsylvania Geologic Survey, <http://www.dcnr.state.pa.us/topogeo/publications/pgspub/openfile/basementmap/index.htm>
29. R. Kerr, *Learning How to NOT Make Your own Earthquake*, Science, Vol. 335, Mar. 23, 2012, pp. 1436-37.
30. K. Keranen *et al*, *Potentially Induced Earthquakes in Oklahoma, USA: Links between Wastewater Injection and the 2001 Mw 5.7 Earthquake Sequence*, Geology, June 20114, vol. 41, no.6, pp.699-702.
31. Seismic maps of Pennsylvania
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36. Response to Summary Comments

I, Roger Reinhart, compliance and enforcement team leader for the Underground Injection Control program and permit writer in Ground Water and Enforcement Branch of the Water Protection Division of Region III, USEPA, certify that the administrative record for the final decision on this permit was final on January 28, 2014. The administrative record includes, to the best of my knowledge, all of the documents required under 40 C.F.R. § 124.18. This Administrative Record Index references all the documents in the administrative record for this permit decision.

Roger Reinhart

3/31/14

Date