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VIA EMAIL AND MAIL

September 24, 2014

Mining and Energy Commission
Attn: Oil and Gas Program
1612 Mail Service Center
Raleigh, NC 27699-1612

Re: NC WARN's Comments on Proposed Rules on Fracking

Dear Sirs:

My client, the NC Waste Awareness and Reduction Network (NC WARN), offers the attached comments on various fracking rules. Our members are deeply concerned that the fracking process leads to additional hydrocarbons, and in particular methane, being released into the atmosphere, leading to more severe climate change.

The rules as proposed are so severely flawed, with major omissions and extremely vague or meaningless standards, that communities and the environment will not be protected. We would like to emphasize that the proposed rules simply do not address the release of air pollutants, nor do they address the takings issue, i.e., forced pooling. The proposed rules also unreasonably hide the toxic compounds used in fracking from landowners and the public.

NC WARN recommends a full rewrite of the proposed rules after a much fuller study of the environmental and societal impacts of fracking. The air toxics issues, the takings issue and lack of disclosure must be resolved before freely allowing fracking in North Carolina.

Please notify me at the address above of any action you take on these rules.

Sincerely,

/John D. Runkle/

John D. Runkle

NC WARN Comments on Proposed Fracking Regulation¹

Coordinated Permit Process

- 1) A permit issued under the proposed rules provides a few of the necessary environmental safeguards. For example, it requires applicants to include a water management plan, which indicates where water will be sourced from and in what quantities.² Additionally, the waste management plan requires that applicants have a basic plan for disposing of mining waste, including produced water and flowback.³
- 2) However, the permit fails to provide any standards for air quality. The rules do not require air quality management practices or plans for managing airborne based pollutants associated with the fracking process.
 - a) In 2012, S820 (SL2012-143) instructed the Environmental Management Commission (EMC) to develop rules to control toxic air emissions from fracking operations. In other states, air emissions from fracking operations have sickened families, destroyed property values, and appear tied to higher levels of birth defects among newborns.⁴ Despite such studies, the Mining and Energy Commission (MEC), EMC, and DENR have not proposed state rules for toxic air emissions, instead suggesting that the state will rely on federal protection.⁵ However, it should be noted that the EPA's federal regulations explicitly exempt wildcat and exploratory wells from having to meet green completion standards.⁶ This is problematic, as these are the kinds of wells that are likely to be drilled in NC.
 - b) With studies showing that gas drilling operations can release toxic chemicals into the air during multiple drilling stages, the MEC should require that wells be constructed to meet green completions standards, which require the capture of methane and other gases that are released during the construction of wells.
 - c) It is also well documented that a single fracking well can require thousands of heavy and light duty truck trips. Diesel truck exhaust contains a number of fine particles and air toxics that can lead to detrimental health effects. The rules completely ignore this issue as well.

¹ Prepared in part by Kyle Peterson, UNC-CH Law School, as part of student *pro bono* project.

² 15A N.C.A.C. 05H .1901(b) (2014).

³ 15A N.C.A.C. 05H.2002 (2014).

⁴ Lisa McKenzie, et al., *Birth Outcomes and Maternal Residential Proximity to Natural Gas Development in Rural Colorado*, Environmental and Health Perspectives, January 2014.

⁵ www.northcarolinahealthnews.org/2014/07/29/fracking-regulators-wont-create-rules-for-air-pollution/

⁶ 40 C.F.R. § 60.5375(a)(4)(f).

- d) The primary reason to regulate air emissions is fracking's potential contribution to greenhouse gas emissions, and in particular methane, leading to increased climate change.⁷
- 3) The permitting process allows the agency to deny an application for environmental purposes provided that "the operation will have significant adverse effects" on the environment.⁸ While this power to deny applications on environmental grounds is a provision that should be included within the regulations as a necessary precaution, the drafters should have provided more detail. For example, what constitutes a "significant adverse effect" is not defined within the proposed regulations. Leaving such key provisions up to interpretation, which can vary depending on the party reviewing the application, does not seem like a prudent idea for NC's overall environmental protection.
- 4) The permitting process also allows variances to be granted to operators provided that they make a "good faith effort" to comply with the requirement or are unable to comply with the requirements.⁹ This seems like an exceedingly vague standard without any criteria. Variances should only be granted in rare circumstances and after a showing that environmental and human health protections will not be undermined. Just because an operator cannot comply with the rules does not mean a variance should be granted. This undermines all of the regulations and protections that come with them.
- 5) While the rules require permit applicants to report the sources of water to be used, expected average and maximum withdrawal amounts, an explanation of alternative sources, and a monitoring plan reporting daily water usage, they do not provide any penalties against operators who exceed their withdrawal limits. Even if the fracking operator is operating cleanly, the process is still inherently water intensive. Excessive withdrawals of water could help lead to water shortages if left unchecked.
- 6) The draft rules state that DENR *may* suspend or revoke a permit if (a) an operator is out of compliance, (b) has falsified information, or (c) a permit was erroneously issued.¹⁰ However, there is no requirement to do so, and no minimum level of noncompliance to trigger a suspension or revocation is given.

Chemical Disclosure and Trade Secrets

- 1) The proposed regulations do not require full chemical disclosure to the agency, local governments, or the public, as many chemically involved processes can be classified as confidential trade secrets.¹¹ The proposed regulations do require well operators to report chemicals used in their operations to

⁷ www.acsf.cornell.edu/Assets/ACSF/docs/attachments/Howarth-EtAl-2011.pdf

⁸ 15A N.C.A.C. 05H.1309(a)(3) (2014).

⁹ See 15A N.C.A.C. 05H.0301(a) (2014).

¹⁰ 15A N.C.A.C. 05H.1313 (2014).

¹¹ 15A N.C.A.C. 05H .1702 (2014).

state environmental officials and emergency responders¹² However, the proposed regulations also make it illegal for these parties to disclose the names of the chemicals. Anyone who leaks “trade secrets” can be cited for a Class I misdemeanor as a result.¹³ To ensure the necessary protection of the environment and public health, all chemicals used should be disclosed publicly. There should not be broad loopholes for trade secrets. This could be achieved on a public database rather than the “fracfocus” registry which is limited in terms of public disclosure.

- 2) The rules also do not require the agency to retain trade secrets for any particular length of time, and do not provide regulations allowing release of this confidential information when contamination shows up years later in nearby drinking water wells. By that time, the drilling company may be gone, and no other source for the information may be available.

Toxic Testing Procedures and Monitoring

- 1) Exacerbating the fact that trade secrets are not allowed to be disclosed, are the inadequate testing procedures for toxic chemicals.
 - a) If the results from the test one series do not exceed the permissible concentrations outlined for the required analytes, then the draft rules do not require the permittee to perform additional testing for a number of these potentially dangerous chemicals (arsenic, barium, radium, and benzene to name a few).¹⁴ This standard should be increased to account for potential errors or misreadings that could possibly occur in the first testing session. Additional testing should continue for all required analytes for at least two, if not more testing series.
 - b) Then, after production is completed, water supply testing is required only once, 30 days after completion of the production activities.¹⁵ There are NO mandatory provisions for long-term testing after production. This means that slow-moving contaminants are unlikely to ever be detected and also that no remedy is provided for people whose health or property is destroyed by long-term contamination.

Contamination and Waste Cleanup - Monitoring Procedures and Penalties

- 1) If water is found to be contaminated, the rules state that the operator has to replace the water supply.¹⁶ While this is a positive provision in essence, it fails to specify how long the operator must do this. In cases of severe contamination, water supplies can be unusable for years.
- 2) Spills of less than one undefined “barrel” of waste do not have to be reported under the draft rules.¹⁷

¹² See 15A N.C.A.C. §§ 05H .1702(a), 1704 (b), (c) (2014).

¹³ 2014 N.C. SESS. LAWS 4.

¹⁴ See 15A N.C.A.C. 05H.1803(h) (2014).

¹⁵ 15A N.C.A.C. 05H.1803(a)(3) (2014).

¹⁶ 15A N.C.A.C. 05H.1804(c) (2014).

- a) This potentially could result in an unlimited number of spills a day of less than a barrel with no record.
 - b) No differentiation is made between a barrel of highly toxic chemical and a barrel of water.
 - c) The definition of a barrel is also not specified.
- 3) Serious issues with the handling and storage of fracking waste, some of which is hazardous, are present within the proposed regulations.
- a) It is unclear where the millions of gallons of fracking waste will be contained and dealt with. Waste is allowed to be “temporarily” stored in open pits, similar to the pits storing coal ash.¹⁸ Most of the industry, and many states, now require containment of waste in tanks only. North Carolina should pursue this avenue, rather than relying on waste pits that are likely to fail. Groundwater testing should still be conducted around these containment tanks also.
 - i) The proposed rules do require secondary containment to mitigate the risk of flooding, but the requirement for “two feet of freeboard”¹⁹ seems inadequate in the case of flash floods or heavy rains which could result from coastal hurricanes. In addition, the rule does not define temporary.
 - ii) As the state has already learned from the Duke Energy coal ash spill on the Dan River, and the coal ash impoundments at the other coal plants, these pits have the potential to overflow and emit dangerous contaminants into the air. Pits release toxic emissions, are prone to flooding, can leak into water supplies and harm wildlife. There are no provisions banning storage and waste pits on hills, even if they are risk for landslides.
 - b) Operators must post a \$1 million bond to cover environmental damage.²⁰ While this may be enough money to close an abandoned well and reclaim the land around it, the sum is likely far too low to provide a remedy for long-term contamination and injury. It is important that we hold companies accountable for spills, leaks that poison waterways and torn up roads, and appropriate bond levels are a starting point for the accountability.
- 4) An earlier version of the rules included a “presumptive liability” of the gas operator for any well contamination within a 5000 foot radius of a gas well.²¹ In the current draft regulations, there is no specific reference to this presumptive liability. Currently the draft rules state that the permittee must

¹⁷ 15A N.C.A.C. 05H.2005(e)(1) (2014).

¹⁸ 15A N.C.A.C. 05H.2002 (2014); 15A N.C.A.C. 05H.1504 (2014).

¹⁹ 15A N.C.A.C. 05H.1504(b)(3) (2014).

²⁰ This amount is required by the Energy Modernization Act. See G.S. 113-421(a3)(2) (2012).

²¹ Clean Energy and Economic Security Act, Ch. 143, 2012 N.C. Sess. Laws 658 §4(b), § 113-421(a).

replace a water supply if any investigation indicates that “the water supply is contaminated due to activities of the permittee.”²²

- a) This seemingly puts the burden of proof on the well owner, with no clear threshold for determining the permittee’s responsibility.
 - b) The rules also do not specify the length of time or conditions under which the gas operator is required to supply water if its operations have contaminated the well.
- 5) In regard to inspections, DENR staff (or appropriately certified contractors) must conduct all inspections of gas operations, and verify required testing of pressures, etc...²³ However, the proposed regulations call for notice to be given to the operator for document reviews and inspections.²⁴ This provision does not add any protection, yet provides a significant advantage to the drilling operators. Unannounced reviews and inspections are critical to protect the public and its resources, as well as workers. In addition, the oil and gas industry has a very poor record of self-monitoring and reporting.
- 6) While there are a number of provisions in regard to the transportation of waste within the state, the rules do not address the import of fracking waste from other areas. No waste should be allowed to be shipped in from other states for any treatment, storage or disposal in wastewater treatment plants, landfills, pits, injection wells or any other facility.

Compulsory Pooling and Eminent Domain

- 1) The regulations do not address forced pooling or other landowner issues such as split estates. Current NC laws give the MEC the authority to pool landowners in this manner.²⁵ However, the draft regulations do not provide any information about when forced pooling can be used or the process for force pooling a landowner. In most states, compulsory pooling requires a certain percentage of surrounding land already be leased.
- 2) Potential recommendations.
 - a) MEC should not approve any forced pooling application for unconventional drilling.
 - b) If forced pooling is utilized, the MEC should not approve an application unless a majority of landowners are voluntarily leased before approving the forced pooling of any unleased landowner.

²² 15A N.C.A.C. 05H.1804(c) (2014).

²³ 15A N.C.A.C. 05H .0203 (a) (2014).

²⁴ *Id.*

²⁵ See G.S. §113-393 (2012).

- c) There should be surface development or disturbance on any property that is forced into a pool unless the surface owner agrees and enters into a surface use agreement with the operator.
 - d) The MEC should defer forced pooling decisions to the judicial process, i.e., a judge and jury.
- 3) Eminent Domain is also not mentioned within the proposed regulations. If there proves to be enough natural gas in NC to draw industry interest and investment in infrastructure, there is potential that eminent domain could be used to make way for pipelines. As such, the regulations should provide for this potential occurrence.

Setback Provisions

- 1) The setbacks are inadequate to protect public health and the environment.
- a) The draft rules require 5 tests of surrounding water supply wells after gas well production is completed – at 6 months, 12 months, 18 months, and 24 months after production has begun and 30 days after completion of production.²⁶
 - i) This time frame is likely inadequate to detect slower contaminant movement. Subsequent well testing should continue annually for all water supply wells within a radius of one mile from gas extraction site for a set number of years to ensure protection.
 - ii) There also is no clarity on what the timing should be if there is more than one gas well on a well pad.
 - b) The draft rules also provide the following setbacks from the well head, edge of a waste pit, production equipment, and tanks: (1) occupied dwellings and high occupancy buildings (650 feet); (2) edge of public road, highway, utility or right of way (100 feet); (3) a perennial stream, river, watercourse, pond lake, or other natural and artificial bodies of water including wetlands and trout stream (200 feet); (4) intermittent stream (100 feet); and (5) public or private water well intended for human consumption or household use (650 feet).²⁷
 - i) Despite NC lawmakers promising to provide the most rigorous fracking protections in the country, the setbacks laid out within the draft rules are smaller than those recommended by several other states and a recent study recommends significantly larger setbacks than our MEC proposes.²⁸ In addition, health studies indicate the potential for exposure to toxic air

²⁶ 15A N.C.A.C. 05H.1802(a)(3) (2014).

²⁷ 15 N.C.A.C. 05H.1601(a) (2014).

²⁸ MARYLAND DEPARTMENT OF THE ENVIRONMENT, MARCELLUS SHALE SAFE DRILLING INITIATIVE STUDY: PART II 17-23 (July 2014) see http://www.mde.state.md.us/programs/land/mining/marcellus/documents/7.10_version_final_bp_report.pdf

emissions causing respiratory and neurological disorders and even DNA damage as far as 1,500 meters from drilling operations.²⁹

- ii) Given such data, the setbacks should be at least 1500 meters or greater. The setback of gas wells from surface waters should also be increased to at least 1000 feet on level ground and should be increased even further on sloped surfaces to prevent runoff from well pads, on which toxic materials are stored and handled, from reaching public waters.

²⁹ Lisa McKenzie et al., *Human Health Risk Assessment of Air Emissions from Development of Unconventional Natural Gas Resources*, 424 SCIENCE OF THE TOTAL ENVIRONMENT 79 (2012).