



*Protecting Ohio's native forests and their inhabitants*

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**Opponent Testimony regarding S.B. 315 Oil Gas Provisions**

Before the Ohio Senate Energy & Public Utilities Commission  
April 24, 2012

Chair Jones, Ranking Member Schiavoni and Members of the Committee, thank you for the opportunity offer opponent testimony on S.B. 315.

My name is Nathan Johnson. I am the staff attorney for the Buckeye Forest Council, a 501(c)(3), membership-based, grassroots organization dedicated to protecting Ohio's native forests and their inhabitants. We seek to instill in Ohioans a sense of personal connection to and responsibility for Ohio's native forests and to challenge the exploitation of land, wildlife and people.

Ohio's oil and gas statutes currently lack adequate standards to address a rapidly growing shale industry in the state. Improvements to S.B. 315 are needed in several areas to ensure that we can better protect our water and allow for increased transparency and public participation.

**I. Ban the Spraying of Oil and Gas Wastewater on Our Roads**

The Ohio Revised Code should be amended to prohibit the spreading of oil and gas wastewater, or "brine," on Ohio's roads. Ohio law allows local communities to authorize the spraying of oil and gas field brine on community roads for dust and ice control. Brine is highly salty wastewater produced by oil and gas operations that typically contains radioactive material and a number of toxic heavy metals, not to mention the hazardous chemicals injected into formation brines during the fracking process.

State law does not require testing of any kind to determine brine contamination levels prior to road application. While the Code does prohibit the spraying of "flowback" brines, which rise to the surface during and immediately after the fracturing process, the spraying of "produced" brines, which rise to the surface during oil and gas production, is allowed. ODNR's

brine spreading guide for local authorities notes that Ohio's produced brines contain high levels of several toxic contaminants, including cadmium, strontium, and lead.<sup>1</sup>

Samples of produced water in the Marcellus Shale analyzed by the State of New York were reported to contain levels of highly radioactive radium 226, a derivative of uranium, as high as 267 times the safe disposal limit and thousands of times the safe drinking limit.<sup>2</sup> Land contaminated by radium 226, such as that found in produced water from the Marcellus and Utica Shales, can pose a threat to "many generations of individuals living or working on NORM-contaminated land for a period covering nearing 20,000 years."<sup>3</sup>

Cornell University researchers recently released a study chronicling some of the negative health impacts brine has had on human and animal health. The study briefly discusses road applications and notes local reports of family pets dying shortly after licking road applications and wastewater puddles. The study also discusses high death and stillbirth rates in beef cattle exposed to brine wastewater.<sup>4</sup>

Brine wastewater is harmful to human health and the environment, and should not be sprayed on Ohio's roads.

## **II. Amend SB 315 to Require Standards for Oil and Gas Solid Waste Disposal**

Chapter 1509 should be amended to include rules governing the disposal of solid wastes associated with oil and gas operations. Solid waste or drill cuttings produced in the drilling of wells in deep shale formations are likely to contain naturally occurring radioactive materials. There are no provisions in the oil and gas statutes or in SB 315 that regulate the disposal of this radioactive material. There have been reports from citizens that this material is being disposed of improperly and on surface-owners' properties. Moreover, R.C. 1509.22(C)(2) provides that "cuttings ... shall not be disposed of in violation of any rule," but there are no oil and gas rules relating to cuttings disposal.

## **III. Eliminate Wastewater Storage Pits and/or Require Pit Fencing**

R.C. Chapter 1509 should be amended to prohibit the use of open-air pits for the temporary disposal of brine wastewater. Doing away with pits is good for the environment and the industry's bottom line.

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<sup>1</sup> ODNr Brine Guide (Pages 19 and 20): <http://ohiodnr.com/Portals/11/publications/pdf/Brine.pdf>.

<sup>2</sup> <http://www.scientificamerican.com/article.cfm?id=marcellus-shale-natural-gas-drilling-radioactive-wastewater>.

<sup>3</sup> Henry Spitz, Kenneth Lovins & Christopher Becker, Evaluation of Residual Soil Contamination From Commercial Oil Well Drilling Activities and Its Impact on the Naturally Occurring Background Radiation Environment, 6 SOIL & SEDIMENT CONTAMINATION: AN INT'L J. 37, 41 (1997).

<sup>4</sup> Bamberger & Oswald, IMPACTS OF GAS DRILLING ON HUMAN AND ANIMAL HEALTH, NEW SOLUTIONS, Vol. 22(1) 51-77 (2012) (Pages 60-61); [http://www.psehealthyenergy.org/data/Bamberger\\_Oswald\\_NS22\\_in\\_press.pdf](http://www.psehealthyenergy.org/data/Bamberger_Oswald_NS22_in_press.pdf).

Alternatively, Chapter 1509 should be amended to require fencing of waste pits. Currently, the Administrative Code is the only source of specific fencing requirements. Incredibly, the OAC only requires fencing of waste pits in urban areas or when within 150 feet of a home. Even then, pit fences need only be three feet in height.

Recent cost analyses indicate the use of more environmentally sound “closed-loop” disposal practices actually saves oil and gas companies money. For example, a study conducted in New Mexico found that eliminating pits, traditionally considered the cheapest disposal method, is actually more cost-effective than their continued use.<sup>5</sup> An Oil and Gas Accountability Project (OGAP) analysis demonstrates that closed-loop drilling systems, which use storage tanks and other equipment instead of pits, are cost-effective and can save money compared to conventional waste management with pits.<sup>6</sup> While initial costs may be higher, closed-loop drilling systems create long-term savings because there is no need to construct pits, drilling waste can be dramatically reduced, water use can be reduced by as much as eighty percent, truck traffic is reduced by as much as seventy-five percent, and tanks can be reused.<sup>7</sup> Comparisons have found closed-loop drilling can result in a cost savings of up to \$180,000 per pit.<sup>8</sup> U.S. EPA’s own studies confirm that closed-loop drilling systems are a safer and cost-saving waste disposal process.<sup>9</sup>

Moreover, open pit storage of wastes results in air emissions of methane, sulfur-based chemicals, and volatile organic compounds (VOCs),<sup>10</sup> and poses far more serious threats of accidental contamination than do closed-loop systems. These risks include wildlife and livestock mortality, and ground or surface water contamination resulting from liner failure, berm failure, or overtopping. As illustration, in Ohio, a fracturing flowback pit was cut with a track hoe in 2010, causing more than 1.5 million gallons of fluid to spill into the environment.<sup>11</sup> In 2008, the back wall of a pit in Ohio gave way, causing pit contents to spill and flow towards a creek.<sup>12</sup>

#### **IV. Increase Baseline Water Testing Radius to 3,000ft; Require Post-Drilling Testing**

Current law only requires pre-drilling water testing in urban areas, and then only when a water well exists within 300 feet of a proposed oil or gas wellhead. SB 315 takes a positive first step by proposing to extend pre-drilling testing to all horizontal wells and by proposing to extend pre-drilling water testing to 1,500ft around proposed well-heads.

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<sup>5</sup> Dorsey Rogers, Gary Fout & William A. Piper, *New Innovative Process Allows Drilling Without Pits in New Mexico* (2006)

<sup>6</sup> Oil & Gas Accountability Project, “Alternatives to Pits.”

<sup>7</sup> Id.

<sup>8</sup> Id.

<sup>9</sup> EPA Office of Compliance Sector Notebook Project, *Profile of the Oil and Gas Extraction Industry*, EPA/310-R-99-006, at 69 (2000).

<sup>10</sup> U.S. EPA, *Measurement of Emissions from Produced Water Ponds: Upstream Oil and Gas Study #1 – Final Report*, Oct. 2009, at 58, available at <http://www.epa.gov/nrmrl/pubs/600r09132.pdf>.

<sup>11</sup> Ohio Department of Natural Resources, Notice of Violation No. 1278508985, June 21, 2010.

<sup>12</sup> Ohio Department of Natural Resources, Notice of Violation No. 2016754140, May 16, 2008.

However, this is still inadequate. Studies have documented pollution extending 3,000ft from wellheads.<sup>13</sup> Moreover, ODNR's own recently released draft lease for state lands requires a 3000ft pre-drilling testing radius.

Periodic post-drilling water testing should also be required so citizens can be assured of their water quality and spot problems if and as they occur.

#### **V. Eliminate Section Preventing Ohio From Enforcing Rules Stricter than SDWA**

Current law prevents the Division of Oil and Gas from promulgating or enforcing rules or permit terms that are more stringent than the Federal Safe Drinking Water Act. This ties state regulators' hands and potentially blocks them from adapting standards and management practices to keep up with new information and changing technology. Section 1509.22(D)(4) should be deleted to free the division to adopt more protective standards.

The effective rate of Ohio's natural gas severance tax is the second lowest in the nation amongst the 29 states that levy such a tax.

There are also no impact fees in the bill. We need more first responders, firefighters, inspectors, and emergency training to deal with the wave of shale development that is coming to Ohio. Ohio needs to step up to the plate and make sure we have a sensible severance tax and impact fee in place.

#### **VI. Amend SB 315 to Remedy Lack of Public Input**

Today there are only limited opportunities for oil and gas permits to have public comment or input before they are issued. Property owners and residents should be afforded a minimum 30-day comment period on proposed injection wells and new horizontal wells in their communities. The Revised Code allows any person who may be adversely affected to submit comments and objections on pending coal mining permits. Ohio allows affected citizen input on coal permit applications; we should do the same for injection and horizontal well applications.

In addition, Section 1509.03(D)(1) of SB 315 would block an adversely affected Ohio citizen from appealing the issuance of an oil and gas permit. Property owners and residents should have the right to appeal permit issuances for wells close to them if there are legally sufficient reasons for doing so. SB 315 as drafted would ensure that such a right does not exist.

#### **VII. Pipeline Oversight**

Speaking of public input, SB 315 does away with Power Sitting Board oversight over natural gas gathering lines, lines less than 5 miles in length, and lines that are less than 9 inches diameter or capable of handling less than 300 psi. Significantly, SB 315 does not provide any

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<sup>13</sup> See, e.g., Boyer et al., The Impact of Marcellus Gas Drilling on Rural Drinking Water Supplies, Center for Rural Pennsylvania (2011), page 4.

substitute oversight in place of what it removes. As it currently stands, SB 315 ensures that there will effectively be no state utility oversight or comment and hearing procedures for the affected pipelines.

Moreover, there is no federal oversight to step into many of the gaps S.B. 315 is creating. Gathering lines in most rural areas are not regulated by the Pipeline and Hazardous Materials Safety Administration (PHMSA) at the federal level. A new report from the Government Accountability Office (GAO)<sup>14</sup> found that not only are these gathering lines unregulated, but there is not even basic information on where they are, or whether any safety procedures are being observed. Without the necessary data, “pipeline safety officials are unable to assess and manage safety risks” from unregulated gathering lines, the report concludes.

### **VIII. Improve Enforcement and Penalty Provisions**

As it stands, “material and substantial violation” is defined in the code to only include procedural violations. There is nothing in the current definition of “material and substantial violation” in Section 1509.01 in SB 315 that gives the chief of ODNR the authority to immediately suspend oil and gas operations due to a spill, blowout, or other source of pollution/emergency. The definition of “material and substantial violation” should be amended to include situations where an owner is causing, engaging in, or maintaining a condition or activity that presents an imminent danger to the health or safety of the public or that results in or is likely to result in immediate substantial damage to the natural resources of the state.

In addition, and not unlike what Ohio Attorney General Mike Dewine recently suggested, penalties for violations should be increased and assessed per day of violation, rather than merely per incident.

### **IX. Require Meaningful Pre-Drilling/Stimulation Chemical Disclosure**

After-the-fact chemical disclosure is often meaningless for communities and citizens who are trying to protect their drinking water. Specific chemicals that are going to be used should be listed in the permit application by their specific names and CAS numbers. In addition, chemical information should be listed by permit number and on the Ohio Department of Natural Resources website. This enables communities and homeowners to test wells prior to drilling to get adequate baseline data.

Per Section 1590.10 (A)(9) of SB 315, a person drilling in the state has to report within sixty days after the completion of the drilling operation to the chief, if applicable, the type and volume of the fluid. For the ‘proprietary components’ in the fluid, the owner only has to identify the chemical class to which the component belongs. This is not transparent as there are many chemicals in a given class which makes it impossible to know what the specific chemical used actually is. The CAS numbers for each chemical used should be on the original permit and permit application as well as ODNR’s website for transparency. Permit numbers and CAS numbers need to be linked.

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<sup>14</sup> GAO, “PIPELINE SAFETY Collecting Data and Sharing Information on Federally Unregulated Gathering Pipelines Could Help Enhance Safety” (March 2012) <http://www.gao.gov/assets/590/589514.pdf>

In Section 1509.10(F), the well owner has to report to the chief of the division of oil and gas the list of chemical compounds and the corresponding amounts that were used during the preceding year. S.B. needs an amendment clarifying that these reports must cover all of the "production operations" as defined in Section 1509.01(A), as well as specifying that chemicals used are given their specific name and corresponding CAS number for clarification.

**X. Increase Inspector Presence and Casing Certification**

There is no requirement that inspectors actually be on site except at the closing of a well. Research, however, suggests that there is as much as a 5% failure rate of well casings.<sup>15</sup> This being the case, inspectors should be required to make sure a well casing is installed properly and certify that such casing has been safely installed to prevent leakage and pollution of neighboring wells and natural resources of the state of Ohio.

Thank you,



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<sup>15</sup> Ingraffea, Some Scientific Failings with the Draft Supplemental Generic Environmental Statement And Proposed Regulations: Comments and Recommendations, page 5 (Jan. 8, 2012).