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August 9, 2010

**VIA U.S. MAIL and EMAIL (RegComments@state.pa.us)**

Environmental Quality Board  
P.O. Box 8477  
Harrisburg, PA 17105-8477

**Re: Proposed Rulemaking, Amendments to 25 Pa. Code Chapter 78**

Dear Sir or Madam:

Citizens for Pennsylvania's Future ("PennFuture") offers these comments to the proposed amendments to 25 Pa. Code Chapter 78 (the "Proposed Chapter 78 Amendments"). Notice of the proposed rulemaking was published in the Pennsylvania Bulletin on July 10, 2010.<sup>1</sup>

PennFuture is a statewide, public interest, membership organization with offices in Harrisburg, Pittsburgh, Philadelphia, West Chester, and Wilkes-Barre. PennFuture's purposes include advocating and litigating state-wide on behalf of the environment and public health, including water quality issues and issues arising out of coal mining and gas drilling activities. PennFuture's membership includes residents of Pennsylvania who use the Commonwealth's rivers and streams for fishing, boating, and other forms of recreation, as well as Pennsylvanians who rely on the Commonwealth's rivers and streams as sources of drinking and household water.

PennFuture commends the Environmental Hearing Board (the "Board") for recognizing the need to update the regulations governing oil and gas drilling to address challenges posed by developments in the gas industry, most particularly the introduction of high-volume hydraulic fracturing and horizontal drilling to Pennsylvania. Failing to amend Chapter 78 to meet those challenges will only lead to more disasters like the ones that occurred at gas wells in Dimock Township, Susquehanna County, in early 2009,<sup>2</sup> and in Clearfield County on June 3, 2010.<sup>3</sup>

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<sup>1</sup> 40 PA. BULL. 3845.

<sup>2</sup> In Dimock Township, a well operator's failure to properly case and cement a gas well caused gas migration that affected thirteen water supplies. See Commonwealth News Bureau, DEP Reaches Agreement with Cabot to Prevent Gas Migration, Restore Water Supplies in Dimock Township (Nov. 4, 2009), available at <http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=2418&typeid=1>.

<sup>3</sup> In Clearfield County, a well operator's failure to use proper blowout procedures and equipment caused a blowout that allowed wastewater and natural gas to escape from the well uncontrollably for sixteen hours. See Independent Report Faults Clearfield County Gas Well Operators for June 3 Blowout (July 13, 2010), available at <http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=12818&typeid=1>.

PennFuture generally supports the Proposed Chapter 78 Amendments and believes that as amended, Chapter 78 will improve workplace safety at drilling sites and better protect Pennsylvania's natural resources, especially the quality of its fresh groundwater resources. However, PennFuture has concerns that the Proposed Chapter 78 Amendments do not always require the most effective available safety and environmental protections, as they should. PennFuture shares these concerns with other groups and has co-signed comment letters submitted by Earthjustice on March 1, 2010 and August 9, 2010 that list and explains those concerns.

PennFuture also has a number of additional concerns with the Proposed Chapter 78 Amendments that are discussed below.

## 1. Section 78.51 Protection of Water Supplies

### a. Proposed Amendments to Subsection 78.51(d)

In instances where gas drilling has a negative impact on individual citizens, that impact is likely to be because drilling adversely affected the quality or flow rate of a well or spring that the citizens used as a source of drinking water. Further, it is simply not practical to expect all, or even most, citizens will be able to afford to hire an attorney to advise them of their rights and a well operator's obligations when drilling adversely affects a source of drinking water. Consequently, it is essential that the regulations governing well operators' duties to replace and restore affected water be absolutely clear so that citizens can learn and enforce their rights on their own to the greatest extent possible.

A discrepancy currently exists between the language establishing well operators' water supply replacement in section 208(a) of the Oil and Gas Act<sup>4</sup> and 25 Pa. Code § 78.51(d), which establishes criteria for acceptable replacement supplies of drinking water. Section 208(a) provides:

Any well operator who affects a public or private water supply by pollution or diminution shall restore or replace the affected water supply with an alternate source of water **adequate in quantity or quality for the purposes served by the supply.**<sup>5</sup>

The emphasized language makes the adequacy of a replacement or restored water supply dependent on whether it will allow the same uses as it did before drilling. However, 25 Pa. Code § 78.51(d) currently describes an adequate replacement or restored supply that is used for drinking water in slightly different terms:

The operator shall affirmatively demonstrate to the Department's satisfaction that the quality of the restored or replaced water supply to be used for human consumption **is at least equal to the quality of the water supply before it was affected by the operator.**<sup>6</sup>

In PennFuture's experience, many citizens understand this language to mean that the contaminant levels in a replacement or restored supply must at least match the contaminant

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<sup>4</sup> 58 P.S. § 601.208(a).

<sup>5</sup> *Id.* (emphasis added).

<sup>6</sup> 25 Pa. Code § 78.51(d).

levels found in the pre-drilling water test, and that when the contaminants levels of the replacement or restored supply do not match pre-drilling levels, the replacement or restored supply is not adequate. The Proposed Chapter 78 Amendments will appropriately eliminate the language in section 78.51(d) that creates such confusion, at least for water supplies that met Pennsylvania's safe drinking water standards before drilling, by defining an adequate water supply as one that meets "the standards established pursuant to the Pennsylvania Safe Drinking Water Act" after drilling,<sup>7</sup> even if all contaminant levels are not at pre-drilling levels.

PennFuture commends the Board for adding section 78.51(d)(3), which clarifies that a replacement or restored water supply is adequate in terms of quantity when it satisfies not just existing needs and demands, but also "any reasonably foreseeable uses."<sup>8</sup>

**b. Subsection 78.51(c)**

The Proposed Chapter 78 Amendments would not change 25 Pa. Code § 78.51(c), which permits DEP to take as many as ten days to investigate a claim that a water supply has been adversely affected by drilling. Although PennFuture understands that DEP consistently responds to such claims within two or three days, the possibility of leaving an individual or family without a source of household water for up to ten days while waiting for a DEP investigation is simply unconscionable. Section 78.51(c) should be modified to require DEP to investigate reports that water supplies that are used for human consumption have been adversely affected by drilling operations be investigated within three days of DEP's receipt of an investigation request.

**c. Identification of Replacement Water Supply**

The various regulations governing coal mining in Pennsylvania require applicants for mining permits to "identify the extent to which the proposed ... mining activities may result in contamination, diminution, or interruption of an underground or surface source of water within the proposed permit or adjacent area for domestic, agricultural, industrial or other legitimate use,"<sup>9</sup> and describe how the mine operator will replace such water supplies if they are polluted or diminished.<sup>10</sup> Chapter 78 should be modified so that oil and gas well operators are similarly required to describe the extent to which a well may pollute or diminish nearby groundwater or surface water used as a water supply and also identify how the well operator will replace such a water supply if pollution or diminution does occur. Such a permit requirement will enable DEP to deny permits for drilling activity that may be likely to cause water pollution or diminution, and ensure that well operators are able to meet their replacement water supply operations in cases where pollution or diminution does occur.

**2. Section 78.85 Cement Standards**

Having adequate cementing requirements is important because a properly-performed cement job isolates underground formations that contain water from each other and from the

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<sup>7</sup> See proposed 25 Pa. Code § 78.51(d)(2).

<sup>8</sup> See proposed 25 Pa. Code § 78.51(d)(3)(i).

<sup>9</sup> E.g., 25 Pa. Code § 87.47.

<sup>10</sup> *Id.*

underground formations that contain gas or oil.<sup>11</sup> Section 78.85(b) of the proposed amendments provides:

After the casing cement is placed behind surface casing and intermediate casing when the intermediate casing is placed behind surface casing and intermediate casing when the intermediate casing is used in conjunction with the surface casing to isolate fresh groundwater, the operator shall permit the cement to set to a minimum designed compressive strength of 350 pounds per square inch (psi) at the casing seat.

It is not clear from the Proposed Rulemaking whether this requirement is derived from an American Society for Testing and Materials (“ASTM”) or American Petroleum Institute (“API”) standard. However, it is clear that the requirement of proposed section 78.85(b) is not as stringent as the standards imposed on well operators in other states, including by way of example, Texas:

Surface casing strings must be allowed to stand under pressure until the cement has reached a compressive strength of at least 500 psi in the zone of critical cement before drilling plug [sic] or initiating a test. The cement mixture in the zone of critical cement shall have a 72-hour compressive strength of at least 1,200 psi.<sup>12</sup>

Proposed section 78.85(b) also is not as stringent as the requirements set forth in the regulations promulgated under Pennsylvania’s Oil and Gas Conservation Law:<sup>13</sup>

The cement shall be allowed to set to a minimum compressive strength of 500 pounds per square inch, using generally recognized industry engineering data for the type of cement used, prior to the resumption of drilling.<sup>14</sup>

There is no reason why the general standard for the strength of setting cement should be less stringent in Pennsylvania than in other states, or why that standard should be less stringent for oil and gas wells that are not subject to the Oil and Gas Conservation Law. Accordingly, the Board should modify proposed section 78.85(b) so that well operators are required to permit cement to set to a minimum compressive strength of 500 psi before undertaking further drilling activity at the well, and so that in the critical cement zone, cement shall be required to have a compressive strength of at least 1,200 psi.

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<sup>11</sup> MARTIN S. RAYMOND AND WILLIAM F. LEFFLER, OIL AND GAS PRODUCTION IN NONTECHNICAL LANGUAGE 141 (2006); *see also* 58 P.S. § 404 (prohibiting the “waste” of oil and gas); 58 P.S. 402(12) (defining “waste” to include the migration of oil, gas, or water from one stratum to another, where such migration would result in the loss of recoverable oil or gas).

<sup>12</sup> 16 Tex. Admin. Code § 3.13(b)(2)(C)(i).

<sup>13</sup> The Oil and Gas Conservation Law purports to apply only to wells that penetrate the Onondaga Horizon. *See* 58 P.S. § 403(b). Although the Marcellus Shale sits above the Onondaga Horizon, John A. Harper, *Devonian*, in THE GEOLOGY OF PENNSYLVANIA 109, 111-17 (Charles H. Schultz, ed. 1999), there are believed to be a number of formations beneath the Onondaga Horizon that may also hold productive quantities of natural gas. *See* John A. Harper, Dana R. Kelley, and Earl H. Linn, *Petroleum – Deep Oil and Natural Gas*, in THE GEOLOGY OF PENNSYLVANIA 507, 507-29.

<sup>14</sup> 25 Pa. Code § 79.12(d).

### **3. Section 78.88 Mechanical Integrity of Operating Wells**

PennFuture commends the Board for adding this section, which will require well operators to inspect wells on a quarterly basis to ensure compliance with the Oil and Gas Act and Chapter 78 regulations. The proposed section 78.88 would require well operators to record the results of those inspections, maintain them for five years, and make them available to DEP for its inspection, but not submit them to DEP on a rolling basis. The proposed section 78.88 should be modified to require well operators to submit reports of their well inspections to DEP as the reports are generated. Such a requirement will help DEP ensure that the quarterly inspections are being performed as required, and also that well operators are addressing any problems discovered during the inspections. Additionally, after they are received by DEP, operators' quarterly inspection reports should be made available to the public for review. Making operators' quarterly inspection reports available to the public for review will help promote public confidence in well operators' compliance with the applicable laws and regulations, and, in cases where such compliance may be lacking, will give members of the public a tool to require compliance in cases where DEP is unable or unwilling to do so itself.

### **4. Section 78.89 Gas Migration Response**

PennFuture also commends the Board for adding this section, which imposes a requirement that well operators immediately investigate, report, and if necessary mitigate incidents of gas migration. The January 1, 2009 gas well explosion in Dimock Township, Susquehanna County underscored the risks posed by gas migration; by imposing a duty to immediately investigate, report, and remediate gas migration on well operators, proposed section 78.89 will help ensure that incidents of gas migration are addressed quickly and that public safety and natural resources are protected.

### **5. Section 78.121 Production Reporting**

On August 4, 2010, Representative Phyllis Mundy introduced House Bill 381 ("HB 381") to the Pennsylvania House of Representatives. HB 381 would amend section 212 of the Oil and Gas Act<sup>15</sup> to require well operators to report the amounts of wastewater they generate from wells drilled into the Marcellus Shale, as well as how they dispose of and treat such wastewater to DEP on a semi-annual basis, and would also require DEP to make those reports available to the public.<sup>16</sup> This amendment would allow wastewater generated at Marcellus Shale wells to be tracked by the public from "cradle to grave" as with other industrial wastes under the RCRA, and would thus either promote public confidence that well operators are following the laws and regulations that govern wastewater treatment and disposal or give the public a tool to help DEP bring operators who are breaking the law into compliance.

In anticipation of HB 381 being enacted, section 78.121 should be modified to provide that DEP shall disclose or make publicly available well operators' production reports (including information on wastewater generation and treatment) to the extent permitted by the Oil and Gas Act and other applicable laws.

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<sup>15</sup> 58 P.S. § 601.212.

<sup>16</sup> The Oil and Gas Act currently requires that the information contained in well operators' production reports be kept confidential by DEP for at least five years. See 58 P.S. § 601.212(a).

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Thank you for your consideration of these comments. PennFuture urges the Board to revise the Proposed Chapter 78 Amendments to include the modifications suggested by this letter, by Earthjustice's August 9, 2010 letter to the Board, and by Earthjustice's March 1, 2010 letter to the Board, and to adopt the amendments as modified.

Very truly yours,

/s/

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