



July 3, 2012

Michael Krancer, Secretary
Pennsylvania Department of Environmental Protection
Rachel Carson State Office Building
400 Market Street
Harrisburg, PA 17101

Dear Secretary Krancer,

Frances Beinecke has asked us to respond to your June 25, 2012 letter in which you share your perspectives on NRDC's peer-reviewed report on fracking wastewater, *In Fracking's Wake: New Rules are Needed to Protect Our Health and Environment from Contaminated Wastewater*. We appreciate your expressed desire to enter into a dialogue with NRDC concerning the issues covered in this report. We are writing to you today, however, to correct a number of mischaracterizations and/or inaccuracies that are contained in your June 25th letter.

At the outset, we note that the primary purpose of our report was to identify policy changes needed to safeguard the American people and our environment from the risks associated with fracking wastewaters. We stated that the most significant policy changes necessary were: "closing the loophole in federal law that exempts hazardous oil and gas waste from treatment, storage and disposal requirements applicable to other hazardous wastes" and "improving regulatory standards for wastewater treatment facilities and the level of treatment required before discharge to water bodies."¹

That additional safeguards are necessary to ensure that whatever fracking does occur in the Marcellus Shale or elsewhere is done in a way which maximizes environmental health and natural resources protection cannot be seriously questioned. One need only refer to numerous media reports over the past five years to be reminded that that the accelerated pace and often ill-planned design of fracking programs in states around the country have raised widespread concern, including specific worries about the safe disposal of fracking wastewaters. See for example, numerous articles in the Pro Publica series, "Fracking: Gas Drilling's Environmental

¹ Rebecca Hammer and Jeanne VanBriesen, Ph.D., *In Fracking's Wake: New Rules are Needed to Protect Our Health and Environment from Contaminated Wastewater*, NRDC (May 2012) [hereinafter "Report"].

Threat;”² the New York Times series authored by Ian Urbina, “Drilling Down;”³ and a recent article on the uncertainties of fracking’s impact on human health published in Nature Magazine.⁴

As the Commissioner of the Department of the Environment for Pennsylvania, your responsibility, as set forth in the Department’s mission statement, is “to protect Pennsylvania’s air, land and water from pollution and to provide for the health and safety of its citizens through a cleaner environment.”⁵

Despite that obligation, nowhere in your three page letter to NRDC did you even once acknowledge the need to further strengthen either federal or state laws and rules governing hydraulic fracturing practices or related gas and oil industry wastewater activities. The evidence strongly belies the notion that not a single enhancement to the federal or state regulatory scheme is needed to adequately protect public health and the environment from the multiple risks posed by the prospect of widespread fracking activities in communities across Pennsylvania.

In your letter, you make seven major assertions. We believe each and every one either incorrectly characterizes NRDC’s report or is otherwise in error. In the remainder of this letter, we set forth our initial responses to those seven points.

First, you argue that the NRDC report is incorrect because Pennsylvania “do[es] not allow disposal of wastewater from shale operations by road spreading.” But your statement on this point does not appear to be supported by statute, regulation or the terms of the relevant general permit, WMGGR064.⁶ You note that this restriction is contained in a Departmental “fact sheet.” But while the current version of the road spreading plan approval request form and an online “fact sheet” specify that shale-produced brines are not acceptable for road spreading, such guidance documents are not binding or legally enforceable. To ensure the public is fully protected from road spreading of fracking wastewaters, the prohibitions you refer to should be officially promulgated by DEP and codified, either in a revised version of WMGR064 or elsewhere in the Department’s regulations.

Second, you note that in April 2011 DEP “virtually ceased the practice of delivering... [fracking] wastewater to municipal sewage treatment plants that were not fully capable of fully treating the wastewater....” In highlighting this fact, your letter implies that NRDC disputed this fact in our report. But, to contrary, on page 27 of our report, NRDC clearly states: “Data from PADEP indicate a 99.5 percent reduction in produced water from Marcellus operations going to

² Available at <http://www.propublica.org/series/fracking>.

³ Available at http://www.nytimes.com/interactive/us/DRILLING_DOWN_SERIES.html.

⁴ Helen Thompson, *Fracking Boom Spurs Environmental Audit*, NATURE, May 31, 2012, at 556-57, available at <http://www.nature.com/news/fracking-boom-spurs-environmental-audit-1.10737>.

⁵ DEP, About DEP – Mission Statement (last visited June 29, 2012) available at http://www.portal.state.pa.us/portal/server.pt/community/about_dep/13464.

⁶ The only prohibition mentioned in WMGR064 is the prohibition on use of brines produced from sour gas wells. Additionally, official data from before recent revisions to WMGR064 indicate that road spreading was used as a method of disposal for Marcellus brines until December of 2010. See Pennsylvania Department of Environmental Protection, PA DEP Oil & Gas Reporting Website, <http://www.paoilandgasreporting.state.pa.us/publicreports/Modules/DataExports/DataExports.aspx>.

exempt POTWs between the first half of 2011 and the second half....”⁷ Your inference that NRDC disputes the fact that DEP has phased-out (however belatedly) the sending of fracking wastewaters to municipal sewage treatment plants is thus not supported by any statement in our report.⁸

Third, you take issue with our critique of DEP’s allowing the storage of wastewater in impoundment pits. You write that “storage of wastewater in on-site pits or in centralized impoundments is not disposal, but short-term storage.” But whether you refer to it as “disposal” or “storage,” the use of open air impoundment pits for fracking wastewaters creates an unacceptable risk of water contamination.⁹ Incidents like those in Amwell Township¹⁰ underscore the potential risks from impoundments to groundwater and/or surface water. DEP’s own records show that the Department has issued 28 notices of violation for impoundment failures in the first six months of 2012 alone, documenting leaks and spills of such wastes as diesel, drill soap, synthetic oil-based drilling mud, brine, production water, corrosion inhibitor, drill cuttings, frack fluid, and defoamer.¹¹ These recorded violations are likely only the tip of the iceberg given the multitude of impoundment ponds currently in use in Pennsylvania. Thus, despite your reference to DEP’s regulatory requirements for the operation of impoundment pits, the on-the-ground experience in Pennsylvania with this storage alternative (as well as the sorry track record of impoundment pits in others states) demonstrates that this technique does not adequately protect public health and the environment.

Fourth, your letter identifies areas in which NRDC and DEP have a difference of opinion and implies that NRDC is factually inaccurate. For example, with respect to underground injection well disposal, our report clearly acknowledges that federal law requires that underground injection well disposal of fracking wastewater occur in Class II injection wells.¹² But, as detailed in the report, we disagree that the requirements for such wells are sufficiently protective of underground drinking water supplies. Because of federal statutory and regulatory exemptions, even characteristically hazardous fracking wastewater is not required to be disposed of into Class I wells, which are specifically designed for such hazardous wastes. Thus, the “strict” federal program to which you allude and which you claim “should result in no discharge to groundwater or surface water” is fundamentally inadequate with respect to fracking wastewater.¹³ Your letter fails to explain why oil and gas wastewaters with the characteristics of

⁷ Report at 27.

⁸ Your letter does, however, misreport that only 47,087 barrels of fracking wastewater were sent to municipal plants in the first half of 2011. In its official data for January to June of 2011, DEP incorrectly lists the following POTWs as brine treatment facilities: Altoona City Authority; Williamsport Sanitary Authority; Ridgeway Borough Sewage Treatment Plant; and Clairton Municipal Authority. As such, the actual amount of fracking wastewater sent to Pennsylvania POTWs during that period was 101,897 barrels, as was noted in our report.

⁹ It is worth noting that impoundment pits additionally disturb large areas of land and emit hazardous air pollutants. Report at 90.

¹⁰ Eliza Griswold, *The Fracturing of Pennsylvania* (Nov. 17, 2011), available at http://www.nytimes.com/2011/11/20/magazine/fracking-amwell-township.html?_r=1&pagewanted=all.

¹¹ See DEP, Oil and Gas Compliance Report (last visited June 29, 2012) available at http://www.portal.state.pa.us/portal/server.pt/community/oil_and_gas_compliance_report/20299.

¹² Report at 6, 7, 18.

¹³ See Abraham Lustgarten, *Injection Wells: The Poison Beneath Us*, PROPUBLICA (June 21, 2012) available at <http://www.propublica.org/article/injection-wells-the-poison-beneath-us>; U.S. General Accounting Office, *Drinking*

hazardous waste should be exempt from the rigorous waste disposal requirements applicable to other industries generating waste with similarly hazardous profiles.

Fifth, you state that “NRDC’s math seems to be off” with respect to the level of wastewater recycling in Pennsylvania. You say that the NRDC report fails to include as “recycling” those wastewaters that are being sent to treatment facilities that meet your latest Total Dissolved Solids regulations and that are, “for the most part,” treating wastewater “for reuse, not discharge.” On this count, you are accusing the NRDC report of inaccuracies when the data we used were based upon the best and only publicly available information from DEP at the time. As your letter acknowledges, waste production reports for fracking wastewater in Pennsylvania do not disclose whether post-treatment water is recycled or discharged. Our report conspicuously notes the data gap problem, stating “It is not possible to determine from the data what volumes of wastewater treated at CWTs were subsequently discharged to surface waters, reused, or disposed of by another method.”¹⁴ These data gaps could be avoided in the future, and additional public policy benefits would accrue, if DEP were to enhance its tracking and reporting requirements and make accurate information on the ultimate destination of treated wastewater from fracking-related activities publicly available in a timely manner.

Sixth, you intimate that NRDC is unnecessarily worried about the environmental impacts of fracking activities on the nation’s water resources and assert that Pennsylvania “has never had a case of drinking water contamination from the hydraulic fracturing process.” The accuracy of this statement depends, of course, on how you define “the hydraulic fracturing process.” If you assume the common-sense meaning of fracking – which includes site preparation, drilling, extraction, waste disposal and ultimately well-plugging – there is, in fact, considerable evidence of fracking-related water pollution in Pennsylvania. For example, your predecessor as DEP Secretary cited “overwhelming evidence” that hydraulically fractured well had contaminated drinking water supplies with methane in Dimock, Pennsylvania.¹⁵ You may also want to review other notices issued to Marcellus operators by DEP for violation of the former section 208 of the Pennsylvania Oil and Gas Act, a provision that relates to the contamination of drinking water supplies.¹⁶ These violations, of course, are in addition to the other well-documented instances of drinking and/or surface water contamination associated with spills of fracking fluids, illegally discharged wastewater, and other fracking-related activities.¹⁷

Seventh, your letter also makes selective reference to the views of EPA Administrator, Lisa Jackson, and other federal officials, when you state that they “have all said that hydraulic

Water: Safeguards Are Not Preventing Contamination From Injected Oil and Gas Wastes (July 1989) available at <http://archive.gao.gov/d26t7/139245.pdf>.

¹⁴ *Id.* at 4, 16.

¹⁵ Open Letter from former Department Secretary John Hanger dated October 19, 2010.

¹⁶ For example information on one such notice of violation issued by DEP retrieved through the Department’s Oil and Gas Compliance Report states the following, “complaint investigation ultimately determined Stang 1 Well had impacted quantity and quality of private drinking water well within 1000 feet of gas well, [DEP negotiated with operator] to replace or restore potable drinking water.” DEP, Notice of Violation of 58 P.S. § 208(a), Violation ID# 590735, (Dec. 16, 2009).

¹⁷ See e.g. Erika Staaf, *Risky Business: An Analysis of Marcellus Shale Gas Drilling Violations in Pennsylvania 2008-2011*, PENNENVIRONMENT (February 2012) available at http://pennenvironmentcenter.org/sites/environment/files/reports/Risky%20Business%20Violations%20Report_0.pdf.

fracturing can be done safely.” Their views are of course far more nuanced, and all have called for further protections and safeguards. For example, Administrator Jackson stated recently that potential fracking-related environmental risks include increased air pollution, demand on local water supplies and wastewater disposal. “If you get a bad operator in there ... they can contaminate an aquifer.”¹⁸ The Administrator also stated that EPA is in the middle of a major study on water pollution¹⁹ and noted the lack of information on chemical disclosure and exemptions of the gas and oil industry from federal environmental laws. Additionally, EPA is currently reviewing federal pretreatment standards for fracking wastewater sent to POTWs, implying the need for further regulation in this area.²⁰ As Administrator Jackson has said, “it doesn’t have to be EPA... but there needs to be standards” to ensure that fracking will be done safely and responsibly.²¹

It is largely with such concerns in mind that NRDC prepared this report. We hoped that, in addition to stronger federal standards, states like Pennsylvania would embrace the need to adopt more comprehensive environmental safeguards so that problems associated with the disposal of hundreds of millions of gallons a year of fracking-related, contaminated wastewater can be minimized. We still hope that you will take up that challenge and begin a comprehensive review to enhance Pennsylvania’s regulatory structure.

Finally, we would like to add a modest suggestion on process for any forthcoming dealings with NRDC or with Pennsylvania-based environmental and citizen groups. In the future, should you be interested in dialoguing with such organizations, it would be a matter of common courtesy if you were to reach out to those groups with your communication first, prior to issuing a press release and prior to posting your letter on the Department’s website. We are always open to sincere opportunities to discuss our work and positions.

Sincerely,



Kate Sinding
Senior Attorney



Rebecca Hammer
Staff Attorney

cc: Frances Beinecke

¹⁸ Andrew Travers, *EPA Chief Promises Action on Air Pollution from Gas Drilling*, ASPEN DAILY NEWS (June 29, 2011) available at <http://www.aspendailynews.com/section/home/147664>.

¹⁹ See EPA, Office of Research and Development, *Plan to Study the Potential Impacts of Hydraulic Fracturing on Drinking Water Resources* (November 2011) available at http://www.epa.gov/hfstudy/HF_Study_Plan_110211_FINAL_508.pdf.

²⁰ More information can be found at <http://yosemite.epa.gov/oepi/RuleGate.nsf/byRIN/2040-AF34#1>.

²¹ Interview of Lisa Jackson by Rachel Maddow on the Rachel Maddow Show (Nov. 21, 2011) available at <http://www.msnbc.msn.com/id/26315908/#45395747>.