



pennsylvania

DEPARTMENT OF ENVIRONMENTAL PROTECTION

SECRETARY

June 25, 2012

Frances Beinecke, President
Natural Resources Defense Council
40 West 20th Street
New York, NY 10011

Dear Ms. Beinecke:

I am writing with respect to the May 2012 Natural Resources Defense Council (NRDC) document, *In Fracking's Wake: New Rules are Needed to Protect Our Health and Environment from Contaminated Wastewater*. We appreciate your perspectives and I look forward to engaging in dialogue about the Report with NRDC and others. While our DEP program experts are still reviewing the 113-page report, I would like to take this opportunity to share with you some preliminary feedback and perspectives that they have provided to me which I think would be helpful to the discussion.

The Report is incorrect and inapplicable to Pennsylvania in many respects. First of all, in Pennsylvania, we do not allow disposal of wastewater from shale operations by road spreading. Only production or treated brines, other than brines produced from shale formations, may be used for road spreading. The use of drilling, hydraulic fracturing or plugging fluids or production brines mixed with well-servicing or treatment fluids (except surfactants) is prohibited. Free oil must be separated from the brine before spreading. For more on that, check out the enclosed fact sheet.

Second, the well known April 2011 DEP call to operators virtually ceased the practice of delivering such wastewater to municipal sewage treatment plants that were not fully capable of fully treating the wastewater to the state standard of 500 ppm of Total Dissolved Solids (TDS). For the first six months of 2011, 1.977 million gallons (or 47,087 barrels) were reported as having been sent to municipal treatment plants. For the second half, according to data reported by operators in production reports, that total was reduced to only 17,136 gallons (or 408 barrels), a reduction of more than 99 percent.

Third, storage of wastewater in on-site pits or in centralized impoundments is not disposal, but short-term storage. On-site pits are subject to regulatory requirements, including, but not limited to, liner and construction and performance requirements to ensure protection against leakage. And temporary storage in centralized wastewater impoundments is subject to strict permit requirements, including, but not limited to, liners and leak detection. DEP has impoundment standards that require an impervious compacted clay sub-base, a 40-mil primary liner and a 40-mil secondary liner with a leak detection zone between the liners. We also require groundwater monitoring wells up-gradient and down-gradient.

Fourth, although underground injection well disposal is not used significantly in Pennsylvania, it should be noted that such disposal, where it is done either in Pennsylvania or elsewhere, has for decades been fully permitted under a strict federal regulatory program -- where there has not been delegation to the state, or state regulations in cases where there has been delegation. This form of disposal should result in no discharge to groundwater or surface water.

NRDC's math seems to be off with respect to Pennsylvania when it reports that only 30 percent of wastewater is being recycled. Most fundamentally, NRDC incorrectly fails to include in the recycling category wastewater that is being sent to wastewater treatment facilities that fully meet the commonwealth's latest regulations on TDS. These treatment facilities, for the most part, are treating wastewater for reuse, not discharge. While it is true that our waste production reports do not designate what happens to the incoming wastewater after treatment, even if these facilities do discharge the water, such discharge would be in compliance with the commonwealth's latest protective standard of no greater than 500 mg/L TDS. Further, there is detailed monitoring required at the intake points—where public water suppliers draw their water—for a host of parameters, including, but not limited to, alpha and beta radionuclides. We have even asked these facilities to go above and beyond what is required in their permit and test for radiation if they are downstream of a facility that formerly discharged treated Marcellus Shale wastewater. Our monitors have consistently shown no levels of radioactive materials above background.

When you add the "reuse other than road spreading" plus "brine or industrial treatment plant" methods of disposal, by our calculations, that adds up to approximately 91 percent of all liquid waste for 2011 being recycled. Some operators, we believe, are at 100 percent and we think that the overall percentage will grow even higher over time.

DEP also recently released a revised general permit for facilities that process oil and gas wastewater. WMGR123, as it is known, provides regulatory clarity and encourages the reuse of treated wastewater at Zero Liquid Discharge facilities. In fact, since we unveiled the revised permit, ten facilities have applied for the permit—doubling the number of facilities permitted under this general permit. Combined, we expect that these 20 facilities will have treatment capacities of more than 12 million gallons per day. Some will even use evaporative distillation to remove every trace of every contaminant from the water.

Pennsylvania has very stringent regulations for the oil and gas industry and has never had a case of drinking water contamination from the hydraulic fracturing process. Hydraulic fracturing to extract natural gas has been done safely in the United States and in Pennsylvania for over 60 years. There are over 1.2 million hydraulically fractured wells. The Pennsylvania DEP under my predecessor and me has shown that hydraulic fracturing can be done safely here. In Pennsylvania, the hydraulic fracturing process takes place 5,000 to 8,000 feet underground, beneath multiple layers of impermeable rock, and there has never been an instance where fluids have returned to contaminate groundwater. My predecessor as DEP Secretary as well as the sitting EPA Administrator and Secretaries of Interior and Energy have all said that hydraulic fracturing can be done safely. None of them has called for a moratorium or endorsed that idea.

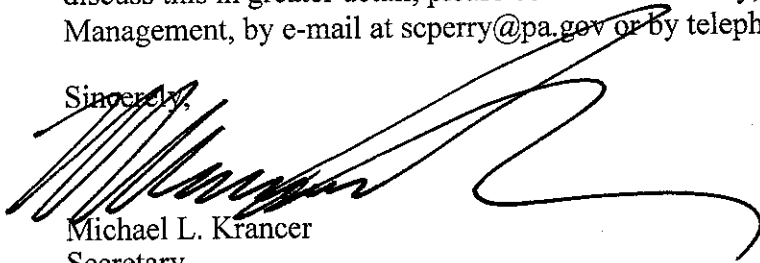
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All of that led a major New York City paper's editorial board to call for New York to "join the 21st century" and proceed with natural gas extraction in that state.

I am aware of the NRDC's longstanding opposition to natural gas extraction by hydraulic fracturing and, as part of that, NRDC's labeling of natural gas as a "dirty fossil fuel." With respect to this "dirty fuel" epithet NRDC hangs on domestic natural gas, I would simply note for discussion purposes the recent press accounts from Canada and Great Britain regarding the dramatic reduction in U.S. carbon emissions mostly resultant from the use of natural gas as fuel. The International Business Times Green Economy Section ran a story on June 20, 2012 headlined, "*US Carbon Emissions Down More Than Any Other Country*" and the Vancouver Observer ran a story on June 4, 2012 with the headline, "*Climate Change Stunner: USA Leads World In CO2 Cuts Since 2006.*" I have enclosed those stories for your review. I do hope that NRDC's constitutional adversity to natural gas as a fuel will not prevent open-minded discussion and fair fact finding. As we move forward, it is crucial that debate on proper policy and regulation rest on a solid foundation of facts.

DEP has worked hard and continues to work hard to protect the environment and health of all the citizens of Pennsylvania through scientific research and proven regulation. If you would like to discuss this in greater detail, please contact Scott Perry, Deputy Secretary for Oil and Gas Management, by e-mail at scperry@pa.gov or by telephone at 717.783.9438.

Sincerely,



Michael L. Krancer
Secretary

Enclosures

cc: Katherine Sinding, Esquire