

February 15th, 2012

Christopher M. Hogan
NYSDEC Headquarters
625 Broadway
Albany, NY 12233

Re: Spectra Energy Application for Permits

Dear Mr. Hogan,

I am submitting comments regarding the above-referenced application on behalf of the Croton Watershed Clean Water Coalition, Inc. or *CWCWC*. We are a not-for-profit coalition of over 50 member groups – community, housing, religious and environmental- in NYC, Westchester and Putnam counties. Our main goal is to protect water supplies throughout New York State, with special emphasis on the Croton watershed.

Extracting natural gas from shale by hydrofracturing – whether by means of vertical or horizontal wells – has been amply proven to be a threat to the integrity of our water resources.ⁱ

But there are other threats, such as introducing a natural gas pipeline into a densely populated area (NYC's West Village) near a planned natural gas underground storage facility. A single explosion could devastate lives and structures.

“The Cleanest Burning Source of Energy”?

Spectra Energy claims natural gas is the “cleanest burning source of energy”. Although natural gas burns more cleanly than oil or coal, the methods necessary to extract it from deep-lying shale through hydraulic fracturing, as used by the oil/gas drilling companies, results in the complete cycles being far dirtier.

For example, in a March 2011 peer-reviewed report, Cornell University professors Howarth, Santoro and Ingraffea show that, contrary to what the drilling companies would have us believe, “[N]atural gas is composed largely of methane... These methane emissions are at least 30% more than and perhaps twice as great as those from conventional gas. The higher emissions from shale gas occur at the time the wells are *hydraulically fractured (emphasis added)*... Methane is a powerful greenhouse gas... *The footprint for shale gas is greater than that for conventional gas or oil when viewed on any time horizon, but particularly so over 20 years. Compared to coal, the footprint of shale gas is at least 20% greater and [perhaps more than twice as great on the 20-year horizon and is comparable when compared over 100 years (emphasis added).*”ⁱⁱ

Even though NYC is not situated in any area where NYS hydrofracturing could occur, yet it will be vulnerable to the additional climate change effects that this method of extraction will induce. Maps are already available that show which sections of NYC will be under water. Burning natural gas derived from shale formations can only be to the detriment of NYC and its quality of life.

The threat of Radon to NYC Residents

In the summary of an article explaining the threat of radon from natural gas to NYC residents, the author, Dr. Marvin Resnikoff, states that “A significant public health hazard associated with drilling for natural gas in the Marcellus shale formation must be seriously investigated by the New York State Department of Environmental Conservation (DEC).”ⁱⁱⁱ [I]n addition, *the radioactive levels at wellheads in New York are higher than the national average for natural gas wells throughout the US (emphasis added).*”^{iv} Data in the Appendix cited in footnote iv show that levels of radium-226 of which radon is a decay product, have levels as high as 1,000 times the Maximum Contaminant Level (MCL) that is considered safe in drinking water.

Dr. Resnikoff then gives a reasoned estimate of the amount of radon that NYC residents can expect in their kitchens if they burn gas from the Marcellus shale. “These wellhead concentrations in Marcellus shale are up to 70 times the average in natural gas throughout the U.S.... In addition, the distance to New York State apartments and homes from the Marcellus formation is 400 miles and sometimes less.... At 10 mph movement in the pipeline, natural gas containing the radioactive gas, radon, which has a half-life of 3.8 days, will have three times the radon concentrations than natural gas originating at the Gulf Coast... Being an inert gas, radon will not be destroyed when natural gas is burned in a kitchen stove... This analysis implies that the radon concentrations in NYC and urban apartments is greater than the national average... We assume a figure of 11.9 million residents affected... We calculate the excess of lung cancer deaths for New York State...: our results: the potential number of fatal lung cancer deaths due to radon in natural gas from the Marcellus shale range from 1,182 to 30,448.”

These figures do not single out the effect on children, in many ways the most vulnerable members of the population. The number of children developing cancer could be higher than the average.^v According to the American Institute of Pediatrics (AIP), “Among long-term injuries to children, carcinogenesis is most important. Studies suggest that radiation exposure during childhood is associated with a greater risk of cancer than in exposure at other ages.”

We cannot recommend too strongly that the NYS Department of Health (DOH) create a protocol for testing radon concentration that will be acceptable as evidence in court cases. If radon concentrations in NYC kitchens and homes were to increase after the introduction of natural gas into the Spectra Energy pipeline, then the company will bear the burden to prove that they are not responsible.

In conclusion, the risks to the public health and welfare should prohibit bringing in shale gas, and particularly Marcellus shale gas, to New York City. The risks are too great. Other methods of supplying NYC’s energy needs must be found. These might include installing solar panels on available buildings, and steps in that direction have already been taken in terms of mapping suitable buildings.

Any new building under construction, or any old building being renovated should have to adhere to energy conservation regulations.

In conjunction with NYC’s outstanding colleges and universities, the City should convene its foremost architects, engineers and city planners to design and develop new buildings, and retrofit old building, so that energy is conserved, and polluting and harmful sources of energy are no longer needed.

Sincerely,

Marrian H. Rose, Ph.D.
Director *CWCWC*

ⁱ See Pro Publica articles at <http://www.propublica.org/article/scientific-study-links-flammable-drinking-water-tofracking>, May 9, 2011

Also, the “Drilling Down” articles in the NY Times by Ian Urbina, March 1 and 3, 2011, June 26, 2011, October 19, 2011, and December 1, 2011.

ⁱⁱ From the abstract for the article entitled: Methane and the greenhouse-gas footprint of natural gas from shale formations, (13 March, 2011), Robert W. Hayworth, R. Santoro Dept. of Ecology and Evolutionary Biology, Cornell U.; A. Ingraffea, School of Civil and

Environmental Engineering, Cornell U. The full article may be downloaded from www.springerlink.com.

ⁱⁱⁱ Radon in Natural Gas from Marcellus Shale, by Marvin Resnikoff, Ph.D., Radioactive Waste Management Associates. January 10, 2012.
www.nirs.org/radiation/radonmarcellus.pdf

^{iv} Appendix 13, Radiological Data – Production Brine from New York State Marcellus Wells, NYS Department of Environmental Conservation, Revised Draft – Supplemental Generic Environmental Impact Statement on the Oil, Gas and Solution Mining Regulatory Program, September 7, 2011.

^vComments on the Scoping Materials for Initial Design of EPA Research Study on Potential Relationships Between Hydraulic Fracturing and Drinking Water Resources, Marian H. Rose, September/October 2010 CWCWC Newsletter