

Office of the Mayor

Matthew T. Ryan

December 29, 2009

Mr. Pete Grannis, Commissioner
Department of Environmental Conservation
625 Broadway
Albany, NY 12233-1011

RE: Comments on Draft Supplemental Generic Environmental Impact Statement

I am writing to provide my formal comments to the draft SGEIS for the anticipated high-volume hydraulic fracturing and horizontal drilling of the Marcellus Shale Gas Play.

Though I recognize drilling will not likely happen soon within city limits, I am a strong advocate of regional planning and development, and understand that this industrial activity will have profound impacts on our region's character in the coming decades. In order to protect and preserve our long-term economic, social, and ecological health, it is incumbent upon all local, county, state and federal officials to help shape and define the rules and regulations that will apply to the extraction of gas from the Marcellus Shale.

There is no doubt that extraction of these massive gas reserves has the potential to achieve impressive economic activity and gains, but it could also produce equally or greater harm to public health, result in severe ecological damage and costly remediation, and depress property values. For certain, the extraction, production and transmission of this nonrenewable resource will consume tremendous amount of resources, specifically land and water. We must get this right to the benefit of all residents in Broome County, and I applaud the Governor, many of our state officials, and the staff at DEC for trying to minimize the risks while enabling the one-time rewards.

Your staff did an admirable job within a very restrictive timeframe and a challenging political dynamic. I consider this draft document a positive and constructive first-step. There are many thoughtful and appropriate parts in this draft document.

However, after careful review of the circumstances, I am convinced much more work needs to be done, that the initial scope of the review was far too narrow, and that there is an overreliance on the permitting process to mitigate many of the known risks and adverse impacts of this industrial activity.



Office of the Mayor

Matthew T. Ryan

Therefore, please know that in addition to submitting my formal comments below, I am also adding my voice to the growing number of municipal leaders and concerned citizens calling upon the Governor to withdraw the draft document, broaden the scope of the supplemental environmental impact statement, and commit to strengthening the rules and regulations that will apply to this unprecedented level of industrial activity.

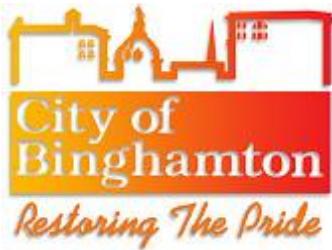
CUMULATIVE IMPACTS

The extraction, production and transmission of gas from the Marcellus Shale will involve an unprecedented level of industrial activity that may adversely impact social, economic and environmental health. The draft document wrongly rejects the notion of an objective, scientific analysis of cumulative and regional impacts, and actually suggests modeling for cumulative impacts is impractical because of too many unknowns. This is a serious deficiency of the draft document.

First, there is no shortage of tools, technologies, and relevant datasets to simulate build-out scenarios that could predict impacts on a multitude of indices. The Broome County Planning Department has generated maps for most landowner coalitions, which indicate every acre of land owned by members of a specific coalition. Similarly, Broome County generated maps of all private and public lands already leased for gas drilling, dating back to 2000. Clearly, data specific to the natural gas market is available, and it should be linked to all relevant datasets, such as geologic formations, watersheds, existing pipeline infrastructure, flood plains, etc. By granting DEC staff more time to conduct a rigorous analysis of cumulative impacts, I am confident we would uncover harmful environmental impacts that the current narrow review of individual well-units misses.

Take for instance the EPA's approach to improving the health of our nation's water bodies, such as the Chesapeake Bay. Though the agency clearly understands the importance of point source pollution, it has also established a cumulative index for total daily pollution of the watershed (total maximum daily load). In other words, the agency objectively established a threshold based on cumulative impacts, and is giving states flexibility in how to comply with this new target. I am confident the DEC can take a similar approach. The DEC must develop and evaluate a reasonable worst-case scenario and identify mitigation measures to address any significant adverse impacts.

AIR POLLUTION - GREENHOUSE GAS EMISSIONS



Office of the Mayor

Matthew T. Ryan

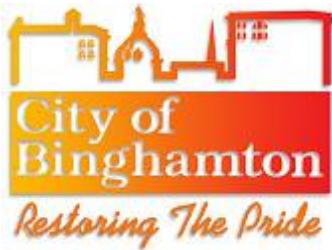
I recognize the value of natural gas as a cleaner burning alternative to coal and oil. However, the extraction, production and transmission of natural gas is clearly a chemical-dependent industrial process that generates greenhouse gases and pollutants that damage our air quality. There is alarming evidence, in fact, that natural gas extraction from the Barnett Shale in Texas has greatly degraded air quality, compromising public health.

Though it does discuss this negative impact briefly, I'm not confident that the draft document adequately outlines ways to reduce flaring, mitigate diesel exhausts, and monitor emissions and leakage from compressors, wells, pipelines, and processing facilities. Again, a more rigorous cumulative impact analysis could identify reasonable levels under which all industrial activity must operate, and outline a set of mitigation measures. I recommend that as part of the permitting process, DEC request a "Greenhouse Gas Mitigation Plan," which must state explicitly how drillers intend to minimize air pollution, from extraction to transmission.

HANDLING AND DISPOSAL OF INDUSTRIAL BYPRODUCTS

Produced "water" and flow-back are two by-products of this industrial activity. Given the tremendous volumes of water that will be required for drilling and fracking wells in the Marcellus Shale, there are serious concerns about establishing clear and strong regulations and rules on proper disposal. The draft document does not adequately address the following concerns:

1. There lacks a clear distinction between drilling waste, flow-back waste water, and produced water/waste. DEC has conducted no testing of these different waste products, even though it is well documented that the waste fluid generated from fracking includes toxic chemicals, naturally occurring radioactive material, high levels of total dissolved solids, brine, and hydrocarbons.
2. Recent findings have concluded that the Marcellus shale is considered to be highly radioactive, quite different from shale gas plays already under development in the United States. The Pennsylvania Bureau of Oil and Gas Management and Bureau of Radiation Protection found that a concentration of radon in a Marcellus Shale gas sample was 1,000x above the EPA's "action level." Also, DEC has found 13 samples of flow-back water from vertical Marcellus Shale wells in Schuyler, Chemung, and Chenango Counties to contain levels of radium as high as 267x the limit for discharge into the environment, and thousands of times the limit for drinking water. In Onondaga County, where the shale is closer to the surface than in other areas, all of the homes underlain by Marcellus Shale had indoor air levels of radon above EPA's



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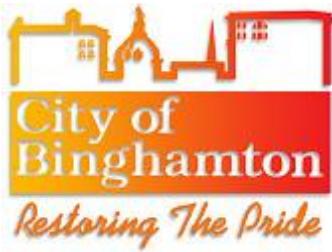
Matthew T. Ryan

action level. Though the draft mentions that no state has yet to assess how NORM might build-up over time, or with “larger accumulations of shale cuttings from horizontal drilling,” I strongly feel that this needs to be studied further. Cooperation with the EPA, pursuant to the goals of the FRAC ACT—smart federal legislation sponsored by Congressman Maurice Hinchey—is strongly encouraged.

3. Given the level of toxicity of waste water from high-volume hydrofracking, DEC should classify this industrial byproduct as hazardous waste, and subject to regulations set out in NYSDEC Part 371. Similarly, the current exemption for “gas drilling wastes” in Part 371 should be removed, or at the very least, limited to low-volume vertical drilling.
4. Once a more appropriate classification is established, DEC must address how interagency cooperation or regulatory overlap will be handled. Similarly, it must also open new areas of inquiry and revisit the proposed modifications. For example:
 - a. Though I am a strong advocate for resource re-use and conservation, I wonder if the reuse of the hazardous waste fluid will actually cause excessive accumulation and concentration of toxic, radioactive materials that might prove harmful to workers and residents.
 - b. Our concerns over radioactivity must extend to the workers, equipment, and tailings. Should companies be required to monitor and test their workers for radioactive exposure? If the drilling equipment shows excessive levels of radioactivity, shouldn't it be deemed hazardous waste, per state regulations? How should the radioactive tailings be handled? Do we have enough facilities to handle solid hazardous wastes? Will the waste handlers be licensed? What are the implications of shipping massive volumes of hazardous waste across states? How will the shipments be tracked for compliance and enforcement?
5. Road spreading of “produced fluid” must not be permissible, since high volume fracking in the Marcellus Shale generates a more toxic byproduct than conventional drilling. Similarly, without a better delineation between the different “waste fluid products” (as mentioned in #1 above), this permitted activity could result in hazardous waste being sprayed throughout our entire County, which is simply unacceptable.

FULL CONTAINMENT STORAGE SYSTEMS

The draft document requires full containment, steel-tank storage systems in some instances, such as when the well pad is in the flood plain, but it generally allows open-lined pits. According to industry experts, there are no operational disadvantages to using closed-loop systems to capture the waste



Office of the Mayor

Matthew T. Ryan

water generated from fracking. Open lined pits are preferred by industry simply because it cuts costs and externalizes risk to the community. I recommend that the DEC completely ban the use of open-lined pits, and eliminate any threshold that allows permit holders to avoid secondary containment systems.

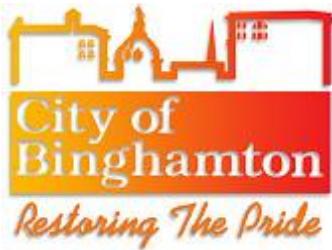
I also recommend that the DEC require containment storage systems for not just the produced waste fluid, but any and all fluids on site, including fuel, hazardous materials, and brine.

SOVEREIGN NATIONS

Multiple sovereign Indian Nations reside within the area of proposed development, and I recommend the draft document clearly describe what steps have been taken to consult with Indian Nations, as required by DEC policy. In addition, there should be a provision in the permitting process for archeological analysis, which is required for all other forms of public and private development projects. It is fact that the gas industry unfairly enjoys many exemptions from federal and state laws, most of which are unwarranted and jeopardize public health. Fortunately, these privileged exemptions are being revisited in the U.S Congress. Similarly, the DEC should reconsider why an industry that is projected to establish 4000 wells in Broome County in the next decade should not be held to the same standards of archeological analysis as all other projects and activity that disturb the environment.

EQUITABLE APPLICATION OF REGULATIONS

Many concerned elected officials, organizations, and residents have argued for a ban of drilling near the source of drinking water for more than 9 million New Yorkers. A recent study commissioned by the NYC Department of Environmental Protection concluded that the current draft document, which lacks sufficient safeguards and clear prohibitions, puts this important and naturally filtered watershed in extreme risk. It also concluded that should the watershed be contaminated, remediation would carry a price tag that exceeds the projected economic benefits of gas drilling to New York City—a sobering reminder that the short-term financial benefits to individual landowners must not take precedence over the long-term economic, social and environmental health of our communities and our state as a whole.



Office of the Mayor

Matthew T. Ryan

I support a complete ban of drilling in the NYC Watershed, and for establishing sufficient prohibitions on well siting that completely eliminates the possibility of contamination of the source of naturally-filtered drinking water for all New York City residents.

Similarly, I think this “zone of prohibition” should be applied to all upstate drinking water sources. Upstate may be unable to generate the same political clout as downstate, but it does not follow then that the drinking water sources for upstate residents should be placed at any greater risk of pollution than downstate residents. Protections of our drinking water sources must be applied equally and consistently, for it would be shameful to have “state sanctioned” environmental racism that displaces the risks of pollution to those communities with fewer resources and less political power.

LIMITED DEC RESOURCES AND CAPACITY – SEVERANCE TAX

Industry experts, DEC officials, and many others acknowledge that DEC does not have the staff and capacity to deal with this massive volume of anticipated industrial activity. DEC officials and state lawmakers have affirmed again and again that permits will be processed only as fast as the agency is able. However, this misses the point. Permitting is an administrative task that introduces important safeguards, but can easily become meaningless without sufficient monitoring and enforcement in the field.

Apparently, New York State is one of the few states with an active extractive industry that does not impose a severance tax. That is a problem that needs to be remedied. A severance tax recognizes the economic reality of extracting a finite, non-renewable resource. I recommend the DEC advocate for a severance tax that would be directed to a “lock box” fund to wholly support the agency’s dual responsibility of protecting residents and our land-base while supporting efficient resource extraction and use.

If nothing else, there should be a clearly stated policy that permitting and well (and pipeline) development will proceed no faster than what can be appropriately monitored and enforced in the field by DEC and PSC.

PERMITTING v. RULES AND REGULATIONS?

An overt dependence on the permitting process provides false security, and the state must couple an improved permitting process with a strong regulatory framework, which should include but not be



Office of the Mayor

Matthew T. Ryan

limited to clearly delineated enforcement powers, a “systems approach” to the industry, and meaningful financial and legal consequences for violators.

INTERAGENCY COOPERATION & NEED FOR A SYSTEMS ANALYSIS AND APPROACH

Throughout the document, there are references to other agencies and multiple levels of governments. County Health Departments are expected to participate in the baseline and ongoing testing of water wells. Sewage and water treatment plants are told to be “vigilant.” Local governments are encouraged to enter into local road use agreements with drilling firms and monitor noise.

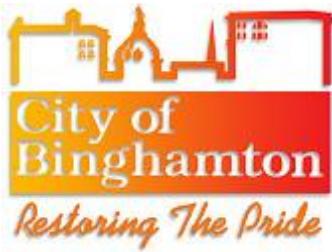
In addition, an independent review of hundreds of DEC documents by Toxic Targeting revealed that the agency failed to properly address the complaints of chemical spills, water contamination, and environmental damage caused by gas drilling. The agency closed many cases and indicated that the call was “passed” to the Division of Mineral Resources, but it seems there exists no follow-up or interagency communication on open, ongoing complaints.

I firmly believe that no amount of revisions to the “permitting process” will address this deficiency. Thus, the draft document must clearly outline the rules and regulations for investigating alleged spill incidents, enforcement responsibilities and powers, and consequences of violations.

On this same note of interagency cooperation, it is frustrating that this industrial activity is being segmented and compartmentalized across a range of agencies and governments. Experts from the Oil and Gas Association have explained that fracked wells in the Marcellus Shale are unique in that they can’t be capped like shallow vertical wells. According to the industry experts, these wells immediately start producing large volumes of gas, and it must be captured and transmitted as quickly as possible.

I find it odd, then, that the infrastructure elements that will be needed for transmission—new gathering lines, trunk lines, compressors, and treatment facilities—receive no substantive mention in this supplemental environmental impact statement. If these wells are useless without the requisite transmission infrastructure, why aren’t the potential environmental impacts of building-out a more robust transmission network part of this review?

I recommend that, at the very least, applicants should be required to submit a gathering line plan that will detail the transmission of gas from the wellhead to a regulated compression station or a regulated and existing transmission line. Local municipalities should also be notified of new gathering and



Office of the Mayor

Matthew T. Ryan

transmission lines, and be given the power to review and amend such plans if the impacts are deemed significant.

PHASED DEVELOPMENT

I recognize that our state's inexperience with the combination of high-volume hydraulic fracking with horizontal drilling of a "hot" (radioactive) shale makes it very difficult to propose the perfect regulatory framework that predicts every risk and mitigates all adverse impacts. I also know that pressures by one of the world's most powerful and richest industries to rapidly develop this gas play have been and will continue to be extreme. Taking these two facts together, it makes a great deal of sense to establish rules for a phased development, and I would strongly urge DEC to outline how such an approach might be implemented.

All of the "unknowns" acknowledged in the draft document, as well as concerns formally submitted by New Yorkers, could be studied with more diligence during a "pilot phase." Through its modeling and simulation analysis, DEC could identify zones of little to no environmental significance in which a limited number of wells could be permitted and monitored. The scientific data collected during the pilot phase could then be used to guide further modifications to the permitting process and regulatory framework. Knowing of the environmental and human disasters that have already happened in Dimmock, PA—Ground Zero for Marcellus Gas extraction in Pennsylvania—it would be irresponsible for New York to take an all or nothing approach. Phased development allows DEC the opportunity to most effectively uphold its mission, and I hope it takes a serious look at this approach.

MARKET INCENTIVES – CREATIVE PERMITTING

Media outlets and a few radical constituencies at both ends of the "gas drilling spectrum" have reinforced a false and misleading stereotype of the "drill-baby-drill advocates versus the anti-drilling environmentalists." Nothing could be further from the truth, and perpetuating this dichotomy is a disappointing and dangerous exercise that undermines our long-term economic, social and ecological health.

This silliness has left little room for civil discussions about many of our shared concerns, as well as creative ways to use market incentives to achieve the DEC's two-fold mission: to protect our natural resources in order to enhance the health, economic and social well-being of all New Yorkers; and to develop our natural resources efficiently and safely.



Office of the Mayor

Matthew T. Ryan

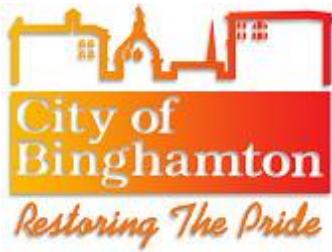
I would like to offer some suggestions, which are merely meant to spur some discussion or thinking about possibilities in going forward:

1. Many public parcels, owned by the State, County or municipal governments, will eventually be leased for gas extraction. If the DEC were to adopt a phased development approach, they could establish a ranking system and reward points for voluntary participation in data collection and review, as well as points for compliance and safety. Future “bids” on publicly-owned land would take into account a firm’s “Safety and Cooperation Rating,” thus rewarding responsible firms with additional leases.
2. Since NYS will be developing its Climate Action Plan next year, perhaps the Greenhouse Gas (GHG) Mitigation Plan could be a leverage point to incentivize certain industry practices, or generate revenue. DEC could prioritize permitting applications of those firms that include either verifiably purchased carbon offsets or plans that have very strong GHG mitigation measures.
3. Any firm that submits a permit application with the intent to use “green chemicals” as an alternative to the toxic soup of proprietary fracking fluids should be processed immediately and given priority. And as stated above, firms that use “green chemicals” could be given priority rating and preference in bids on public land gas leases.

These are not impractical recommendations. In fact, they are pragmatic variations of a whole range of market incentive strategies already being used in housing and community development sectors to generate “greener homes” and more “quality development.” There is no reason why we shouldn’t pause and consider from the start how to use market forces to drive competition toward our common, primary goal of responsible, safe gas extraction.

CONCLUSION

I want to thank you and your staff for your commitment to this challenging task. The anticipated scope and volume of Marcellus Shale gas extraction over the next few decades is stunning. Fortunately, we can learn from other states, proceed with extreme caution, and develop a strong permitting process and regulatory framework for this industrial activity to ensure we greatly minimize the documented risks to economic, social, and ecological health. It can be done, so long as the DEC is given the time and resources to achieve these goals. New York can and should strive to be a leader of other states.



Office of the Mayor

Matthew T. Ryan

To date, I have heard only one consistent refrain from those who want to speed this process up: “We need the money.” It resonates. Our State, imploding at the seams and facing a ballooning budget deficit, needs the revenues from this activity. Our County, struggling under serious budget pressures, needs the jobs and economic gains. Our landowners, struggling to make ends meet in a stagnant upstate economy and undermined by years of federal and state policies that favored wealthy corporations over working families and small farms, need the upfront lease payments from gas companies to save the farm or send a child to college.

I completely understand these circumstances, and I empathize with these struggles. But in the absence of a strong regulatory framework, I simply cannot support industrial activity that promises short-term financial gain for some while sacrificing the long-term health of our economy, workers and families, and ecology. That’s not an acceptable trade-off.

I want to make clear that I am not advocating for a prohibition or ban. I’m advocating for more time to develop a stronger permitting process and regulatory framework to ensure the documented risks of this industrial activity are clearly understood, addressed, and minimized. I am advocating for responsible, safe drilling and production. The previous GEIS for natural gas development (1992) took four years to develop. The current SGEIS has been in process since July 2008 – about one and one-half years. The development potential of unconventional gas in the Marcellus and similar shales is enormously greater than any similar development ever seen in New York. The concurrent risks and hazards are also comparably greater. It is only reasonable to take sufficient time to get this right. Water, air resources, and human health, once damaged, often cannot be fixed.

Unfortunately, there is a silly notion being promoted by the industry and its allies that a delay in the review process will mean the loss of billions in economic activity. That is absolute nonsense. Natural gas deposits will only increase in value in time, and even a couple years could mean the difference of tens of millions. Take the gas market right here in Broome County. Approximately a year ago, gas leases were being signed for \$1,500/acre. Today’s negotiations are around \$5,000/acre, and this is still well below the lease terms seen in the Barnett Shale Gas Play, which exceeded \$20,000/acre as development was in full steam.

In all honesty, the short delay caused by the dSGEIS benefitted landowners financially. This is not surprising, and we can rest assured that the basic market conditions of supply and demand will continue, over time, to add more value to this non-renewable, limited commodity. Any claims to the contrary are specious and disappointing.



Office of the Mayor

Matthew T. Ryan

Twenty years from now New Yorkers will look back at this pivotal moment with either anger and pain, or appreciation and comfort. We must be vigilant, firm, and cautious as we prepare the appropriate permitting process and regulatory framework for this unprecedented level of natural gas extraction. And we must have the courage and humility to acknowledge when we fall short. This document is a strong first step, but there is much more work that needs to be done. I hope the Governor withdraws this draft document, and gives your dedicated and determined staff sufficient time to analyze and propose the rules that will uphold your agency's mission.

Thank you very much for your service and commitment to the long-term health and prosperity of our residents, communities and great state.

Sincerely,

A handwritten signature in black ink that reads "Matthew T. Ryan". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Matthew T. Ryan, Mayor