New York State Department of Environmental Conservation
Division of Mineral Resources, Bureau of Oil and Gas Regulation
Committee on Environmental Protection
Public Hearing on
The Draft Supplemental Generic Environmental Impact Statement Relating to Drilling for Natural Gas in New York State Using Horizontal Drilling and Hydraulic Fracturing

Testimony by Catherine McVay Hughes, Vice Chairperson, Community Board One

Tuesday, November 10, 2009
6:30 p.m. Stuyvesant High School Auditorium, 345 Chambers Street, New York, NY

Good evening. I am Catherine McVay Hughes, Vice Chairperson of Community Board One (CB1). We appreciate this opportunity to testify about The Draft Supplemental Generic Environmental Impact Statement (SGEIS 9/30/2009) Relating to Drilling for Natural Gas in New York State Using Horizontal Drilling and Hydraulic Fracturing.

We thank you for recently extending the deadline to comment on this document an additional 30 days to December 31, 2009. However, this is still not enough time to comment on an 803-page technical, draft SGEIS on the potential impacts of directional or horizontal wells and the use of multi-well pads, which the document itself states "are not addressed in the GEIS." [i] The hydraulic fracturing technological milestone for the use of multi-well pads and cluster drilling occurred only in 2007.[ii]

Last month, CB1 unanimously passed a resolution calling on Governor David Paterson, Senator Kirsten Gillibrand, Congressman Jerold Nadler, State Assembly Speaker Sheldon Silver, State Assembly Member Deborah Glick, State Senator Daniel Squadron, and the New York City Council to actively support an amendment to the SGEIS that would ban hydraulic fracturing in the New York City watershed and extend the deadline for comments to January 31, 2010.

Our major concern is that "1,077 square miles of the Watershed that are not protected potentially are available for the placement of well pads for the development of shale gas reservoirs"[iii] – especially since there is "a scary record of hydraulic fracturing in other states … including leaks and spills; water pollution; explosions; and water theft," according to a report by Manhattan Borough President Scott Stringer. [iv]

As you know, both the NYS DEC and the New York City Department of Environmental Protection (NYC DEP) have a mandate to protect the watershed and the land surrounding it. The NYS DEC also has a mandate to protect the groundwater and surface water of New York State. We have concerns that drilling or fracturing could cause problems or contaminate the surface water (watershed) or groundwater in the areas of work.

A November 8, 2009 Binghamton Press & Sun-Bulletin article, "Natural gas quest: State files show 270 drilling accidents in past 30 years," highlights the lack of oversight and inadequacy of enforcement in NYS:

> An Ithaca researcher [Walter Hang, president of Toxic Targeting] has culled a list of 270 files documenting wastewater spills, well contamination, explosions, methane migration and ecological damage related to gas production in the state since 1979... By Hang's assessment, they are a long way from fine. Only 60 of the 270 cases[v] were actually caught by DEC regulators. Many were called in by residents, public safety officials, affected parties or "people who just stumbled over them," he said…More than three-quarters of oil and gas problems on the spills database were caught by somebody other than a DEC staff member, according to Hang's assessment. That's further evidence the Division of Mineral Resources -- with about 17 inspectors -- lacks the manpower to oversee traditional well development, let alone the Marcellus, he said.[vi]

Therefore, we need to seek a much greater assurance of safety than the typical reclamation funding that is currently in place. The exploration and production of natural gas in critical watershed areas should be monitored much more closely since it involves injected materials and not just the withdrawal of natural resources. Additionally, we are concerned not only about the depth of the natural gas wells, but with the horizontal drilling activities which are very extensive and potentially damaging.

Therefore, NYSDEC should seriously consider requiring that financing be in place prior to establishing even so much as a well head to cover the cost if water filtration plant is required to remove biological, chemical or radiological contamination.. We are concerned that "shell" companies could be established, and if a problem were to develop, there would be only the taxpayer left with the bill to remediate the damage as we have seen in many superfund sites.

There is no need to rush into drilling for natural gas within the boundaries of our watershed. Our country's supply of natural gas is projected to be more than sufficient for years and decades to come, and according to a recent federal Energy Information Administration publication, "the current forecast assumes some additional production curtailments as natural gas inventories begin to swell toward capacity limits this month."[vii] In other words, we are already drilling more gas than we can store.

We also have the following concerns:

- Cross contamination between surface water and drinking water wells
- Well permit issuance in the watershed areas
- Septic fields in the area permitted for drilling or fracturing
- Dual roles for the city and state in the protection of NYC drinking water

- Gas leaks [viii]
- Public access to well information – this should include posting online all forms[ix] completed by the applicant prior to commencement of site preparation

We also ask that the SGEIS adequately clarify the following points:

- Although the report states that, "New York natural gas production supplies about 5 percent of the State's natural gas requirements,"[x] the report does not clarify how much of NYS's natural gas production is exported over the NY state borders nor whether there is a requirement for gas "mined" in NYS to be used in NYS.
- Although a potential revenue stream is projected – including a "royalty of 20 percent,[xi]" there is no cost analysis provided regarding lost revenue from water bottling companies, the negative impacts associated with deteriorated farm land and forests, the maintenance of highway infrastructure damaged by intense heavy machinery and truck use, the installation of high-tech water treatment facilities to address a wide range of contaminants and potential impacts on air quality. Why not?
- How will the amount of natural gas generated be confirmed? How are the meters validated?
- How did the GEIS determine that only a 150-foor setback is required for private water wells and domestic supply springs[xii]?
- How does DEC determine that only at the 1,000-foot corridor does it need to notify NYCDEP of any proposed well in the counties outside of NYC, so that NYCDEP could determine if the proposed surface locations is within a 1,000-foor corridor surrounding a water tunnel or aqueduct?[xiii]
- Is the setback for the proposed well and well pad from Ground Water Resources to be either at least 2,000 feet deep or 1,000 feet below the underground water supply adequate based on the hydrogeology in that specific drilling location? DEC bases that distance instead on determining that the threshold exceeds the NYSDOH required setback distances for analogous activities such as "fertilizer and/or pesticide mixing and/or clean up areas" that could occur on the pad, since much can happen below surface. [xiv]
- How does DEC consider that its requirement that "evidence of diligent efforts by the well operator to determine the existence of public or private water wells and domestic-supply springs within half a mile (2,640 feet) of any proposed drilling location"[xv] is satisfied? How will DEC verify this?
- The SGEIS gives the following example: the "operator immediately provided drinking water to the affected residents and subsequently installed water treatment systems in several residences"[xvi] after a well operator caused turbidity in nearby water wells in February 2007. Does this mean that this would occur in all such situations?
- Although the SGEIS states that, "The first horizontal well in New York was drilled in 1989, and <u>in 2008 approximately 10% of the well permit applications received by the Department were for directional or horizontal wells</u>"[xvii] and that, "Currently, there are about 6,700 active natural gas wells in the State,"[xviii] the report does not clarify how many of these are horizontal gas wells nor whether these wells are active or plugged.

- The SGEIS states that for "Each application to drill a well is an individual project, and the size of the project is defined as the surface area affected by development."[xix] This ignores the accumulative impact of multiple wells. In addition, in a later chapter we learn that, "Depending on the geology, a typical horizontal well in the Marcellus Shale" could cover "approximately 80 acres."[xx] Therefore, one well could cover a wide area. What are the projected costs to address the extensive potential damage from a well of this size? Is the funding in place to cover those costs?[xxi] Have DEC and other stakeholders determined that the amount that would be in place to cover restoration is adequate? Do the current financial documents that you require cover this potential damage? We believe the completed financial forms required by the NYS DEC should be available online. [xxii] In light of the recent financial crisis, what are the assurances that the financial institution holding the Certificate of Deposit or Bonding will not fail?
- Which companies have and are seeking horizontal drilling permits in NYS? Do they disclose this information on their balance sheets as potential liabilities? For example, in an official statement issued by the Long Island Power Authority (LIPA) in a corporate securities filing, there is specific discussion concerning decommissioning costs and payments related to their nuclear power plant.[xxiii] The Nuclear Regulatory Commission (NRC) states that three types of decommissioning funds are acceptable: an external sinking fun, a prepayment account or a surety bond, letter of credit or insurance.[xxiv] Will these also be required of these natural gas companies?

We ask that you wait until the recently introduced New York State Assembly Bill No. A08748[xxv] regarding regulation of the drilling of natural gas resources has been discussed. This bill would prohibit "drilling for natural gas within the NYC watershed or anywhere within 5 miles of its boundaries." In addition it states that "where gas drilling is allowed it is to be done in such a way as to protect drinking water. If there shall be contamination of water wells, there is a presumption that the natural gas driller is responsible unless they can show by clear and convincing evidence that they are not the contaminator."

In summary, we have reviewed the SGEIS and based on the information it contains, and the procedures it sets forth, we oppose any and all permits for gas drilling in the New York City watershed. Our opposition is based on:

1) ***The high possibility of fluid spills.*** Fluid spills could ultimately drop millions of gallons of toxic waste directly into our water system and into the homes and businesses of 8 million people.

2) ***Difficulty of protecting against and compensating for spills.*** It is virtually impossible for gas drillers to protect against such spills, provide backup supplies of water, or pay for the remediation that would be necessary after such a spill. The homes and health and livelihoods of 8 million New Yorkers and 18 million of residents of the tri-state area depend on the New York system and the economy it supports. Though, the SGEIS describes a precedent where drillers compensated their victims when spills and aggressive drilling polluted drinking water, it is unlikely that drillers could compensate 8

million residents and a business area that includes the world's largest central business district, midtown Manhattan, and accounts for, according to a Price Waterhouse estimate, $1.1 trillion in gross domestic product. Every individual here, and every penny earned, depends on drinkable water.

3) ***The emphasis on a high level of driller self-regulation.*** The SGEIS proposal of driller self-regulation is highly impractical, given that economic incentives are likely to drive drillers to evade regulation, bypass careful oversight, underestimate risks, and under-report the impact of their activities.

We recognize that the long-run interests of the economy require extensive fossil-fuel extraction. We also know that natural-gas drilling is in fact slowing down as storage capacity limits are reached. And it is true that in the long run the country and the city need diverse sources of energy.

But water that is clean, safe and affordable is in the interest of every New Yorker. New York City is the only world-class city that does not get its water from the nearest river; the city water system is one of mankind's great achievements in civil engineering, turning rainwater and gravity into the very lifeblood of our metropolis. A highlight of the 2008 presidential election was the "drill baby drill!" slogan repeatedly at political rallies. The SGEIS tells us loud and clear that "drill baby drill" will mean "spill baby spill" in the language of hydro-fracking, and will ruin our water system, threaten our health, raise our taxes, and devastate the economy of our city. Save our health. Save our city. Kill the Drill.

As the Community Board representing Lower Manhattan, which includes the World Trade Center site, we were deeply concerned about the safety of our air and water after the terrorist attacks of September 11, 2001. The City has committed significant resources to defend its 8 million residents against toxic and radioactive chemicals. To allow horizontal drilling and hydraulic fracturing in the Marcellus Shale within the boundaries of our watershed for potential short term financial gain is unconscionable. In other parts of the world, countries are going to war over the quantity and quality of their water supply. Our water supply is one of our most precious resources, and we must continue to vigilantly protect it. Thank you for your consideration of CB1's testimony today.

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[i] Page 3-3
[ii] NYSERDA Agreement No. 9679, page 5
[iii] Page 2-22
[iv] "Uncalculated Risk: How plans to drill for gas in Upstate New York could threaten New York City's water system" (February 2009)
[v] http://www.scribd.com/doc/22163083/Drilling-Spills
[vi] http://www.pressconnects.com/article/20091108/NEWS01/911080372
[vii] "***U.S. Natural Gas Consumption.*** Total natural gas consumption is projected to decline by 2.0 percent in 2009 and 0.2 percent in 2010 (U.S. Total Natural Gas Consumption Growth Chart). Weak economic conditions continue to hamper the industrial sector, where the most recent data show natural gas consumption is down by 12.4 percent through July compared with the same period last year. With lower consumption in the residential and commercial sectors as well, natural gas use in the electric power sector continues to serve as the only demand outlet for increased

natural gas supplies," according to Short-Term Energy and Winter Fuels Outlook dated October 6, 2009 Release, Energy Information Administration, Official Energy Statistics from the U.S. Government, http://www.eia.doe.gov/emeu/steo/pub/contents.html

[viii] The New York Times, "Curbing Emissions by Sealing Gas Leaks, by Andrew C. Revkin and Clifford Krauss, October 14, 2009

[ix] The information provided should include but not be limited to: Affirmation of Acreage Control and Rights in Target Formation for wells subject to ECL Section 23-0501, Annual Well Report and instructions, Applicant's Checklist for Spacing Unit Map (for wells subject to ECL Section 23-0501, Application For A.P.I. Well Identification Number, Application For Non-Conforming Spacing Unit or Variance From Regulatory Well Spacing, Application For Permit to Drill, Deepen, Plug Back or Convert a Well, Application For Transfer of Underground Storage Permit, Compulsory Integration Election Form, Environmental Assessment Form (EAF) for well permitting, Notice of Intention to Plug and Abandon, Organizational Report, Plugging Report ,Request For Well Transfer, Request For Shut-In or Temporary Abandonment, Well Drilling and Completion Report.

[x] Page 2-4

[xi] Page 2-6

[xii] Page 2-24/25

[xiii] Page 7-61/62

[xiv] Page 7-66

[xv] Page 7-66/67

[xvi] Page 2-27/27

[xvii] Page 5-21

[xviii] Page 2-4

[xix] Page 1-5

[xx] Page 2-5

[xxi] For example, Form 85-11-2 (11/84), NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, DIVISION OF MINERAL RESOURCES - BUREAU OF OIL AND GAS REGULATION, FINANCIAL SECURITY WORKSHEET, states that for: CATEGORY 1 - Wells up to 2500 feet in depth x $2500; CATEGORY 2 - Wells from 2500 to 6000 feet in depth x $5000. And there is a discount for the more wells you own. When was the last time that this form was updated? 25 years ago? In November 1984? Are there different requirements of forms or financial requirements to complete if the drilling permit is for a vertical or a horizontal well? If not, why? http://www.dec.ny.gov/docs/materials_minerals_pdf/fs_wrk.pdf

[xxii] Financial Security Worksheet, Well Plugging and Surface Restoration Bond, Irrevocable Letter of Credit - sample letter, Certificate of Deposit - sample letter

[xxiii] http://emma.msrb.org/MS275555-MS273304-MD554527.pdf, page 76/236

[xxiv] http://www.nei.org/keyissues/nuclearwastedisposal/factsheets/decommissioningnuclearpowerplantspage5

[xxv] http://assembly.state.ny.us/leg/?bn=A.8748