

Dear Commissioner Martens,

I am writing to request that the DEC address the following concerns as part of its revision of the draft SGEIS:

The SGEIS is based on two false premises. The first is that the GEIS (1992) is adequate to address aspects of gas drilling that pertained in traditional vertical wells. This premise has been demonstrated to be false by the 270 cases of leaks, unremediated pollution, explosions and other mishaps (documented by the DEC's own data) that have resulted from traditional vertical drilling).

The second premise is that hydro-fracking the Marcellus Shale is desirable and will be of economic benefit to New York State. This is highly debatable. While drilling may create some sorts of jobs and generate some forms of economic activity, it will also negatively impact current local economic activity: higher education; dairy industry; farming (especially organic farming); grape growing and wine making; hunting and fishing and tourism. In short, hydro-fracking is not necessarily a public good, and, is quite likely a malefic activity (unless it can be very carefully regulated and monitored).

1. The DEC must address water quality. The NYTimes articles expose the pollution of waterways by untreated/able fracking fluids. They outline a variety of pollutants, brine and radioactivity. All these must be addressed.

The Duke University study demonstrates that dangerous and unhealthful levels of methane from the Marcellus layers in drinking water wells are correlated with nearby gas wells in PA and NYS.

The DEC must address this with a public registry of mandated reporting of pre-drilling water well information (2 mile circumference) and any drinking water well problems within 2 weeks of developing. (In PA gas companies keep drinking water well problems secret because there is no mandated requirement to report them, thereby obfuscating the extent of water problems).

2. The DEC must address radioactivity. The DEC has yet to address these problems, including water from gas wells, cuttings in NYS landfills, exposure of workers, transportation of radioactive materials, etc. The NYS Department of Health indicated that the extreme amount of radioactivity from NYS Marcellus layers constitutes a major problem, and this point was amplified by the NYTimes articles. It is especially problematic if it gets into the food chain. The DEC must establish regular radiation testing for cuttings, wells and produced/flowback water at the expense of the companies.

3. The DEC must address the issue of hazardous waste: Related to the issues above is that of hazardous waste. All water issued forth from gas wells is hazardous and must be ticketed and tracked accordingly. There have already been numerous incidents in PA in which truckers have been sighted spilling such toxic water on the roads, in streams and leaked from holding ponds, etc. The holding ponds themselves must be eliminated in favor of closed systems. Yet there will always be some produced and flowback water needing to be disposed of safely.

4. The DEC must address well construction and cement issues: Most of the problems related to leakage and blow-outs have had some relationship to cementing problems. This area needs to be investigate thoroughly and carefully regulated with numerous inspections etc. Drilling literature recognizes that the cementing of wells is problematic and that the cement deteriorates over time. Can it ever be done safely?

5. The DEC must address the health effects of HHVHF drilling:
The chemicals used to hydro-frack are known carcinogens, mutagens and endocrine disruptors. These chemicals leach into the environment through such means as spills, imperfections in casings, tears in impoundment linings, evaporation and through the spread of frack water on roads (or illicit emptying of frack tanks where no one is watching!). The broad spread of these chemicals in the environment come at a time when health professionals recommend decreased exposure to them.

Drilling activities and the attendant infrastructure (compressors, dehydration facilities pipelines, etc) produce air pollution and high rates of ozone. Among other health problems, high rates of asthma (25%) are reported in N. Texas school children. Air pollution must be addressed by DEC regulations.

The DEC should develop a mandatory reporting of health problems within a designated radius of gas wells and infrastructure, something that PA has just indicated it will start.

6. The DEC must address property value issues: Most studies indicate that the values of properties that are leased and those that are nearby decrease! Further, proposed setbacks of only 100 feet run counter to the secondary mortgage market, such that local mortgage lenders would not be able to sell them. (Most secondary financiers require 200-300 ft setbacks). Gas drilling and infrastructure on properties would also compromise title insurance stipulations. Property value assessments are also compromised by leases and drilling.

7. The DEC must address cumulative effects: Probably the most cited criticism from the EPA on down is that the cumulative effects of gas

drilling have not been documented. What happens to wildlife, water, health, the economy (of wineries, tourism and higher education) with the erasure of bucolic landscapes hacked up by roads, rigs, air pollution, truck traffic, compressors and the like? What happens when markets will no longer purchase Upstate produce because it comes from ³fracking country²? Credible economic studies (not those that are industry funded or inspired) show that, after the boom phase, local economies of extractive industry boom towns perform worse than do those of nearby towns not engaged in mineral mining.

What will our landscape, air water and health look like after these industrial build-outs?

Finally, how can the DEC, with the loss of so many personnel, possibly regulate this runaway industry?

Thank you for considering these points. They are but the tip of the iceberg of concerns related to this form of gas drilling. NY State can ill afford to pollute its land, air and water for the short-term gains of multinational energy companies and a handful of landowners. The health and well-being of the State's people and wildlife come ahead on the short term gains for Exxon/XTO. Please wait until these and related issues can genuinely be dealt with before releasing the SGEIS.

Sincerely,

Gretchen H

June 19, 2011

*Honorable Joseph Martens
Commissioner
New York State Department of Environmental Conservation
625 Broadway
Albany, NY 12233-4500
Dear Commissioner Martens:*

Do we want a Chemical Chernobyl in New York?

I worked for over three decades as a theoretical physicist at the Los Alamos National Laboratory in New Mexico where I devoted most of my

professional effort to enhancing the prospect of the alternative energy source of magnetic fusion. The uniquely beautiful environment of western NY State attracted my wife and me back to our native state after my retirement six years ago.

*One of the unquestionable tenets of physics is the **law of increasing entropy**. Entropy can be thought of as a measure of disorder. Thus the law states that the total disorder of a system can only increase. If one attempts to increase order in part of the system, then elsewhere even greater disorder must occur. **This law would appear to be especially relevant to hydrofracturing.***

*The **natural gas located in New York State is not situated like an oil or natural gas reservoir in a localized well or mine, but is distributed throughout huge expanse of the state. So unlike the case of "mining" localized sources of oil or gas, one has to hydrofracture New York State in order to get at and concentrate; i.e., order, the gas from its previous state of random, disordered distribution. But the law of increasing entropy implies that this comes at a price; i.e., increased disorder. The necessarily increased disorder will manifest its ugliness as environmental destruction: poison in the biosphere, pollution in the waters and air, including arsenic and other heavy metals, and radioactive nuclides, such as radium and the gas radon.***

*Furthermore, the recent Cornell University research of R. W. Howarth, R. Santoro, and A. Ingraffea has demonstrated that **the impact on global warming due to the released methane in shale gas production may be more than twice as great as that released in conventional coal.** They documented this in "Methane and the greenhouse-gas footprint of natural gas from shale formations" that appeared in the journal *Climate Change*: DOI 10.11007/s10584-011-0061-5.*

The possible immediate financial gain to the energy companies of the short-lived 10-year supply of natural gas will be far outweighed by the future loss to the public through health and environmental degradation whose financial effect will end up being borne by New York State. The farming, dairy, and wine industries will be destroyed. Future tourists, avoiding such devastation, will look back at beautiful photographic relics

and ask why didn't our state officials "Just Say No!" The value of real estate will plummet.

Therefore, I have grave reservations about the shortcomings of the SGEIS.

I write to request that the New York State Department of Environmental Conservation (DEC) immediately expand the scope of its efforts to revise the draft Supplemental Generic Environmental Impact Statement (SGEIS) pursuant to Executive Order No. 41.

With that goal in mind, I write to request that DEC address the issues described below.

I understand that DEC has been ordered to complete its revision by 7/1/11. The original draft SGEIS received such scathing criticism that Executive Order No. 41 was necessitated. I have never heard of a regulatory do-over of this magnitude in recent decades. I respectfully urge DEC to complete its revision without regard to any arbitrary deadline.

Executive Order No. 41

Just before leaving office, former Governor Paterson acknowledged the shortcomings of the draft SGEIS by signing Executive Order No. 41. It requires DEC to:

“complete its review of the public comments, make such revisions to the Draft SGEIS that are necessary to analyze comprehensively the environmental impacts associated with high-volume hydraulic fracturing combined with horizontal drilling, ensure that such impacts are appropriately avoided or mitigated consistent with the State Environmental Quality Review Act (SEQRA), other provisions of the Environmental Conservation Law and other laws, and ensures (stet) that adequate regulatory measures are identified to protect public health and the environment;”

DEC stated that its review and revision efforts would be limited to comments received prior to 12/31/09. You met with citizens on 3/23/11 to discuss a coalition letter that asks Governor Cuomo to require public comment in order to pinpoint all the technical, scientific, regulatory and legal issues that have come to light during the last 18 months.

*An Associated Press (AP) article quoted you on the record saying: "Some people say we should reopen the process. We're looking at all of that," Martens said. **We're trying to solicit and digest all the information we can and put it into a document that***

addresses all the concerns raised to date [emphasis added]. It's a really formidable task.'

Martens said **New York's permitting guidelines will address problems that have been seen in other states, particularly Pennsylvania, where Marcellus Shale drilling and fracking has been blamed for contamination of water wells and rivers** [emphasis added]."

See: <http://www.toxicstargeting.com/news/2011-05-23/ap-interview-ny-drilling-regs-may-take-all-summer>

Specific Requests for Immediate Action

I urge you fulfill your promise to require DEC's revision of the draft SGEIS to address all Marcellus Shale horizontal hydrofracturing concerns "raised to date," including the following specific matters.

1. There are nearly 11,000 signatories to a coalition letter that asked Governor Paterson to withdraw the fatally-flawed draft SGEIS and send it back to the drawing board. That letter documents a wide range of fires, explosions, polluted water supply wells, homes evacuated due to natural gas intrusion and massive gas drilling wastewater spills that still exceed clean up standards decades after occurring.

The letter also requests that the Governor address a wide range of concerns regarding inadequate gas release disclosure requirements, lack of financial surety to address gas hazards, failure to impose strict liability for clean up of gas hazards and the failure to establish a dedicated gas pollution clean up fund comparable to the spill remediation fund. Please address all those issues in DEC's revision.

See: http://www.toxicstargeting.com/MarcellusShale/coalition_letter

2. DEC excluded from the SGEIS proceeding a wide range of critical issues that were identified at its scoping hearings. I request that DEC re-assess those

comments in light of developments since 2008 and include all concerns deemed to be within the scope of Executive Order No. 41.

- 3. The U. S. Environmental Protection Agency submitted extremely detailed comments regarding the inadequacy of the draft SGEIS and requested that DEC share co-lead agency status with the New York State Department of Health. EPA also wrote that DEC's 1992 GEIS is out-of-date in so many respects that it should not serve as the basis for developing new horizontal hydrofracturing regulations.*

EPA specified numerous fundamental shortcomings, including: potential impacts to public health, water supply, water quality, wastewater treatment operations, local and regional air quality, management of naturally occurring radioactive materials and cumulative environmental impacts.

EPA's letter states: "EPA recommends that these concerns be addressed and essential environmental protection measures established prior to the completion of the SEQRA process." Given the enormous array of shale gas developments since 2009, EPA Administrator Lisa P. Jackson has been asked to update EPA's comments. I ask DEC to address all of EPA's concerns in the revised draft SGEIS.

See: http://www.toxicstargeting.com/MarcellusShale/documents/comments/2009/31/12/epa_comments

See: <http://www.toxicstargeting.com/node/6729>

- 4. EPA is conducting a National Hydrofracturing Study. EPA Administrator Jackson has been asked to provide DEC with all pertinent documents compiled for that investigation. I request that DEC review those documents and address all concerns deemed within the scope of Executive Order No. 41.*
- 5. The New York Times recently published a landmark three-part series about Marcellus Shale Gas wastewater hazards. That investigatory effort compiled more than 30,000 pages of documents, including, but not limited to: extensive gas drilling wastewater monitoring results, legal orders to halt gas drilling wastewater discharges to*

Publicly Owned Treatment Works, environmental assessments of gas drilling wastewater impacts on water quality and hundreds of EPA and State government documents detailing high concentrations of Total Dissolved Solids (TDS), petroleum hydrocarbons and radionuclides in gas drilling wastewater. I request that DEC review all those documents and address all concerns deemed within the scope of Executive Order No. 41.

6. *Natural gas wastewaters have been documented to contain TDS up to 413,000 parts per million, Total Petroleum Hydrocarbons in the diesel range up to 72,600 parts per billion and a broad range of Radionuclides. These persistent pollutants can “pass through” “secondary” wastewater treatment systems, concentrate in residual sludges and cause worker hazards. I request that DEC review these data and address EPA’s technical recommendations in its review. See pages 7-18 at: http://www.toxicstargeting.com/sites/default/files/pdfs/docs_110303.pdf*

7. *According to the draft SGEIS, “Flowback water recoveries reported from horizontal Marcellus wells in the northern tier of Pennsylvania range between 9 and 35 percent of the fracturing fluid pumped [emphasis added].” (See page 5-97.) Those meager recovery rates lead to the conclusion that horizontal hydrofracturing constitutes deep well injection of fluids that could threaten drinking water supply sources. DEC requires State Pollutant Discharge Elimination System (SPDES) permits for deep well injection of natural gas fluid. Those permits can only be granted on the basis of site-specific, individual EIS reviews.*

Given DEC’s long-standing policy, I request that Marcellus Shale horizontal hydrofracturing permits be subject to individual EIS proceedings instead of a Supplemental GEIS. DEC is requiring individual EIS reviews for the New York City and Syracuse watersheds. I believe all New Yorkers who drink water drawn from unfiltered groundwater sources in the Marcellus Shale formation must be afforded equal protection in every aspect of the letter and spirit of New York law. I request that DEC adopt that policy in its revised draft SGEIS.

8. *I request that all discharges of gas drilling wastewater, including flowback as well as “produced” or “brine,” to groundwaters be subject to New York State’s GA (groundwater that supplies potable drinking water) effluent limitations. I ask DEC to adopt that policy in its revised draft SGEIS.*

9. *DEC concluded in its Final SGEIS Scope: “In the absence of a pattern of incidents that indicates a regulatory weakness or gap, the occurrence of isolated accidents or violations do not of themselves constitute reason to re-open the GEIS [emphasis added].” (See 8.3.2.)*

DEC’s assertion is directly contradicted by hundreds of spills reported to the agency as well as additional information compiled by Chautauqua, Cattaraugus and Allegany County Health Departments.

On November 9, 2009, detailed DEC spill information was released for public review that identified more than 270 incidents involving drill rig fires, explosions, homes evacuated due to gas drilling hazards, polluted water supply wells, gas drilling wastewater spills and various other oil/gas releases that had not been cleaned up. Many of those problems have exceeded remediation requirements for decades.

See: http://www.toxicstargeting.com/MarcellusShale/drilling_spills_profiles

On April 5, 2010, extensive information was released for public review that documented widespread natural gas impacts reported by the aforementioned health departments pursuant to a Memorandum of Understanding with DEC. Dozens of these problems were reported prior to the adoption of the GEIS in 1992 and have not yet been cleaned up.

See: http://www.toxicstargeting.com/MarcellusShale/documents/chautauqua_catta...

I request that DEC review these two sets of government data and revise its 1992 GEIS to address all reported environmental and public health concerns. I request that the revision be completed prior to adopting a revised draft SGEIS.

10. *I request that DEC investigate its claim that: “No known instances of groundwater contamination have occurred from previous horizontal drilling or hydraulic*

fracturing projects in New York State [emphasis added].” (See: DEC Marcellus Shale homepage.)

See a videotaped interview with Mr. David Eddy, a resident of Independence, NY, who described how his drinking water supply well and house were reportedly impacted by toxic contamination caused by the hydrofracturing of a gas well across the street from his home: http://www.toxicstargeting.com/MarcellusShale/videos/andover_independence_ny

A U. S. Energy document is available for your review that reports toxic contamination of Mr. Eddy's water well, notes that the firm paid for a water treatment system and "put Mr. Eddy and his family in a hotel several nights during the initial impact." That document also discloses "U. S. Energy has offered Mr. Eddy compensation which he has refused."

See: http://www.toxicstargeting.com/sites/default/files/pdfs/us_energy.pdf and http://www.toxicstargeting.com/sites/default/files/pdfs/allegany_county.pdf

I request that DEC address Mr. Eddy's incident in its revision of the draft SGEIS.

11. Governor Cuomo has been alerted to extremely serious mortgage lending impacts reportedly associated with gas leases. Problems associated with real property devaluation and marketability could cause catastrophic economic troubles throughout New York. I request that DEC address this critical issue in its revision of the draft SGEIS.

See: <http://www.toxicstargeting.com/MarcellusShale/alerts/natural-gas-leasing-impacts-on-mortgage-lending>

12. A 1996 DEC investigation determined that: "New York State oil and gas production equipment and wastes are not significantly contaminated by naturally occurring radioactive materials (NORM). The concentrations of NORM found on oil and gas production equipment and wastes pose no threat to the public health and the environment. The research and analysis supporting this conclusion were performed in 1996. Direct measurements of the radioactivity at well sites were performed. Samples of scales, sludges, sediments, soils, water, rock, brines, waxes, and oils were taken and analyzed by gamma spectrometry."

See: <http://www.dec.ny.gov/chemical/23473.html>

These conclusions are contradicted by radionuclide data referenced by EPA: "such concentrations are considered elevated and many pose unacceptable human health risk mainly via external exposure, inhalation of radon and thoron decay products, and to some degree via inadvertent ingestion. Although, most states have not yet formally classified oil and gas drill rig personnel as occupational radiation workers, at least health and safety measures should be considered to educate the personnel about radiation exposures and reduce their exposure to as low as reasonably achievable. The pipe scale and filter media could be the major sources of radiation exposure and need to be handled and disposed of appropriately."

See page 8 at: http://www.toxicstargeting.com/sites/default/files/pdfs/docs_110303.pdf

I request that DEC address these concerns in its revised draft SGEIS.

- 13.** *Governor Cuomo received a 4/7/11 letter requesting that he bar the discharge of gas drilling wastewaters into Publicly Owned Treatment Works in the Finger Lakes Region of New York that are neither designed, constructed, maintained nor regulated to be able to handle those contaminated materials. Gas drilling wastewaters have been prohibited at POTWs in Pennsylvania and Ohio. I request that DEC address this concern in its revised draft SGEIS.*

See: <http://www.toxicstargeting.com/MarcellusShale/documents/letters/2011/04/07/cuomo-letter>

- 14.** *Among the most disconcerting EPA documents obtained by The New York Times is a Regional Administrator Briefing Overview that contains a recommendation for a gas drilling moratorium in the New York City Watershed. See page 16 at: http://www.toxicstargeting.com/sites/default/files/pdfs/docs_110303.pdf*

A recent article quoted EPA Region 2 Administrator Judith Enck: "I was at EPA Region 2 when we were preparing our comments, and there was a debate on whether or not to call for a moratorium on hydrofracking in the New York City watershed," Enck said. "And there was a difference of opinion. Some people did, some people didn't." See: <http://www.wnyc.org/articles/wnyc-news/2011/apr/15/its-possible-albany-will-never-allow-fracking-agency-head-says/>

See below a 12/24/09 email sent by Mr. Phil Sweeney. It notes: "For the New

York City watershed, we recommend that a precautionary approach be taken, and that a moratorium be established... [emphasis added]."

EPA evidently reversed its position on imposing a New York City gas drilling moratorium between when Mr. Sweeney publicly reported the moratorium on 12/24/09 and when Region 2 submitted formal comments to DEC on 12/30/09. I request that DEC investigate EPA's rationale for imposing the proposed moratorium and address that concern in its revision of the draft SGEIS.

*From: "Sweeney.Philip@epamail.epa.gov" <Sweeney.Philip@epamail.epa.gov>
Sent: Thu, December 24, 2009 9:55:56 AM
Subject:*

I am writing to notify you that EPA Region 2 has provided comments on the NYSDEC draft Supplemental Generic EIS for Well Permit Issuance for Horizontal Drilling and High-Volume Hydraulic Fracturing to Develop the Marcellus Shale and Other Low-Permeability Gas Reservoirs.

*One concern included in EPA's letter is that the analysis of cumulative and indirect impacts should be significantly expanded. We also recommend that a greater emphasis be placed on potential adverse health impacts. *For the New York City watershed, we recommend that a precautionary approach be taken, and that a moratorium be established*, which could be followed by a phased permitting plan which would limit the intensity and impacts of drilling activity. In addition to these highlights, the letter includes technical comments on issues including air quality, water quality, habitat protection, and radioactivity.*

*A press release about EPA's comment letter will be issued today, and a copy of the letter will be available on our website:
<http://www.epa.gov/region2/>*

*Philip Sweeney
EPA Region 2
NYC Water Supply Protection Team
Phone: 212.637.3780
Fax: 212.637.3887*

- 15.** *I request that DEC address inadequate staffing and funding concerns documented in this internal memo as part of its revision of the draft SGEIS: http://www.toxicstargeting.com/sites/default/files/dec_dobletter_Grannis2010-HL.pdf*
- 16.** *Finally, a coalition letter with more than 5,000 signatories has been sent to Governor Cuomo to request a public comment period to address how the scope of the draft SGEIS must be expanded to include concerns that came to light after the proceeding began nearly three years ago. I request that DEC respond favorably to that request. Accepting written comments ad hoc is a poor way to “solicit input” on an important matter that could have irreparable impacts on New York’s environment, public health and economy.*

See: http://www.toxicstargeting.com/MarcellusShale/cuomo/coalition_letter

At least 64 Legislators are signatories to a similar letter to Governor Cuomo.

See: <http://www.toxicstargeting.com/MarcellusShale/documents/letters/2011/04/13/assembly>

Conclusion

In conclusion, Executive Order No. 41 is an historic effort to require DEC to make sure that the environmental impacts associated with Marcellus Shale horizontal hydrofracturing are “appropriately avoided or mitigated” prior to the permitting of that activity. The concerns I respectfully ask DEC to address would help achieve that goal and serve as a model of effective government regulation for the nation as a whole.

I trust you will find my concerns self-explanatory. Thank you very much for your consideration and for your continuing public service.

Very truly yours,

Dear Commissioner Martens:

I am one of the co-signers of Walter Hang's detailed and technical letter about hydro fracking in the Marcellus Shale. I do not wish to burden your server with a copy of this fine document over my own signature.

I should, however, like to add a few remarks of my own. I am deeply concerned about destruction of agricultural land, both now in production and potentially useful, at a time when agriculture (including viticulture) is once again becoming an economic mainstay of my Finger Lakes area. I am concerned about the noise pollution we would endure as the result of hydro fracking at a time when our tourist economy is increasing. I am concerned about the air pollution that would result from diesel exhaust and wellhead methane escape. I am deeply concerned that effects of hydro fracking would adversely impact the attractiveness of Cornell University and Ithaca College, both mainstays of your economy and the former one of the world's great research universities.

In short, not only is the draft SGEIS inadequate in the matters it addresses, but it also leaves unconsidered many matters of the gravest importance.

Sincerely yours,
Donald M

Dear Commissioner Martens,

I write to request that DEC address the following concerns as part of its revision of the draft SGEIS.

There is a monumental disconnect between what leased landowners think they are signed up for, and what they are actually about to experience. That is because the landmen do not tell them. They don't tell them the hazards. They don't tell them the best practices. They don't tell them what their neighbors will have to endure. Why? Because the guidelines aren't even written yet!

To me this seems like a clear case of fraudulent claims. How can you, in good faith, enter into a contract for which you have no reliable details? I am aware that these landmen have used extremely underhanded tactics to persuade landowners to sign leases, and I know that many landowners have contacted the state attorney general to complain. Until the facts of the drilling process are known there is no way citizens can make informed decisions on what the impacts will be.

This process has been done backwards. This has occurred for one reason only, and that is because high volume horizontal hydrofracking with 'long laterals' is dangerous to health, dangerous to the prosperity of other businesses, and

dangerous to the land and water and air where it takes place. How else to even get it started, than to obtain the rights first, and then define the rules later?

I know that it is not your job to address this issue of fraudulent claims. But it should be front and center in your mind, that when the document which regulates gas extraction is finally ready, it should be clear and easy for landowners to review, to establish exactly what potential harms and changes they, and their neighbors, will experience, so they (and their attorneys) can make an informed decision.

So what should be in the document? It should insure the safety and peace of mind of those who live in drilling areas and downstream, those who never wanted drilling to occur. In my opinion this cannot possibly be done. Where I live and conduct my organic farming operations, (powered by grid connected solar) the weather pattern often allows for a thick mist over our little valley for many hours, sometimes days at a time. My neighbors have leased with surface rights, and I am concerned about the ability of this 'valley mist' to hold and concentrate the noxious and toxic airborne contaminants associated with drilling operations, both during development and production. You cannot change the weather.

Another area I have read about, and believe is a potent problem, is radioactivity in the Marcellus Shale. Please note that I say 'potent' problem, not 'potential' problem. Radioactivity is way out of your range to control or mitigate. Below I note the conclusions to a radioactivity report prepared by Marvin Resnikoff, and dated May 2010. It was prepared for 'residents for the preservation of Lowman and Chemung', who commissioned it to supplement another, less detailed report by Fotuna Energy. I have also attached the full report to this email.

Conclusions:

1. The hazard associated with the disposal of incompletely dewatered Marcellus shale drill cuttings and drilling fluid in a municipal landfill has not been fully evaluated by NYSDEC. The Marcellus shale has elevated radioactive concentrations, approximately 25-30 times above background concentrations. The drilling and dewatering processes enhance the concentration of radium in the drilling fluid. Rock cuttings that hold up to 20% of this fluid are still considered solid waste and will be disposed of in the County landfill. The introduction of this radioactive material into the

landfill will give rise to serious problems due to the generation of radon, radiologically contaminated leachate and to potential reuse of the site in the future. NYSDEC regulations regarding the radiation doses from a decommissioned site and the allowable concentrations of radium in soil will be exceeded. In our opinion, these radioactive rock cuttings and associated radioactive drilling fluids belong in a radioactive landfill, such as the Envirocare landfill in Clive,

2. Major uncertainties have not been resolved. The findings of the CoPhysics report conflict with borehole gamma readings and with the independent measurements of the USGS. The CoPhysics report does not explain where the cuttings were found and processed. The measurement methodology, EPA 701.1, and the use of a surrogate Bi-214 to measure Ra-226 are not appropriate for this case.

3. Worker exposure to radioactivity at the working face of a landfill that disposes such waste can be expected to exceed health-base dose limits set by EPA and NRC.

4. The waste at issue can be generated only by means of industrial processes in two gross phases:
(a) fluids with chemical additives are forced into subterranean shale formations under high pressure, where they leach out NORM, making the fluids much more radioactive than they were before injection; solid waste is generated from the return waste water only by means of another set of industrial processes, including a shale shaker, centrifuge, and perhaps other mechanisms.

5. The drilling fluids that provide the source for the solid waste are chemically changed by pressurized contact with NORM, concentrating the NORM in the fluids. For example, barium is added to drilling mud pumped into a horizontal wellbore in order to extract radium sulfate from cuttings. This solid may be disposed of with the rock cuttings.

6. Based on RESRAD calculations, the radiation exposures received by a future resident farmer will exceed allowable regulatory limits. The radium concentrations in soil will exceed EPA regulatory limits. NYSDEC has not examined the environmental and health and safety implications of disposing of shale cuttings in a solid waste landfill. In our opinion, the radioactive scale cuttings and fluids are more appropriately deposited in a radioactive landfill designed for this disposal.

Both the weather issue and the radioactivity issue are problems which will have bearing not in snapshot moments, but in the long run, the cumulative impact of months and years of exposure to those of us living in the Marcellus and downwind/downstream. I want to point out, that for this reason, your work has not led to a document ready to regulate gas development. Instead, it is work which proves that the dangers (known and unknown) of gas drilling are not fixable. This work has been worthwhile, in fact crucial to us who live in New York state. But you cannot present it as regulation, because it is not.

Further research, by those in other fields, have brought us in June of 2011 to a point of reckoning vis a vis natural gas. It seems quite clear to me, that in terms of greenhouse gas emissions, economic havoc of boom and bust cycles, intent to sell LNG on global markets, and diversion of subsidies from sustainable fuels, that natural gas is not the answer the industry has promised us. It is not a 'greener' fuel. It is not an economic fix for our area. It is not 'patriotic'.

It's a money making scheme, for those involved. It stands in the way of a truer version of energy sustainability, and must be avoided. Consider this statement from Attorney General Eric Schneiderman explaining why New York is suing federal agencies to slow the rush to allow drilling: "Before any decisions on drilling are made, it is our responsibility to follow the facts and understand the public health and safety effects posed by potential natural gas development." Teddy Roosevelt would approve, as would Richard Nixon and others who understood that nature only comes around once, that those who live on the Earth have a responsibility to it, that an ounce of regulation is worth a ton of pollution.

Subsidies and tax breaks for the oil, gas, and nuclear energy industries have led to a dangerous and unsustainable dependence on fossil and nuclear fuels, and the sooner we transfer those subsidies to renewable energy, the better. A 1998 study by Greenpeace entitled "Fueling Global Warming: Federal Tax Subsidies to Oil in the U.S." found that there were between \$5 billion and \$35 billion in annual

subsidies to oil companies in the U.S. depending on how one makes the calculation and hence whether or not one includes such things as U.S. grants to the Strategic Petroleum Reserve and other less visible oil-related subsidies.

Here is a key citation from the 1998 Greenpeace report: "The oil companies continue to argue that...clean power solutions are not viable in the near to mid-term. The viability of these energy alternatives must be evaluated taking into consideration the \$5 to \$35 billion in annual subsidies to oil documented in this study, as well as the billions in additional support flowing to other fossil fuels in the U.S. and abroad."

On a global scale there are over \$400 billion in annual subsidies given by governments to the coal, oil, and natural gas industries, the three principal carbon fuel industries listed here in the order of their respective carbon footprints per net unit of energy. When one includes the global subsidies to the nuclear power industry, this figure rises to over \$600 billion annually that is currently being allowed to foster global warming, global climate change, air pollution, the undermining of public health, unconscionable strip mining, the spilling of oil at sea, mercury poisoning, as well as the next Three Mile Island, Chernobyl or Fukushima.

Ecologists should not be blindly following the Obama administration line on this issue, but rather should be calling for an end to ALL tax subsidies, whether state or federal, to carbon fuels and to nuclear power, including to the Strategic Petroleum Reserve, which U.S. oil companies, not the American tax payer, should be paying to maintain during our ongoing yet calamitously slow transition to a fully renewable global energy system.

Despite the current level of government subsidies that are being given to both the carbon fuel and atomic power industries, geothermal electrical production in the U.S. is already significantly less expensive than electricity generated by either coal or nuclear power, which are currently the two most important sources of electrical production in the U.S. and around the world. Onshore wind is also a less expensive source of electricity than either coal or nuclear power yet U.S. and international subsidies are being allowed to distort the overall price structure of the current global energy market.

According to the U.S. Department of Energy, the United States potentially has 140,000 times the amount of geothermal energy that it would need to power the entire U.S. at the level of our current electrical demand. What is more, three states alone, Texas, Kansas, and North Dakota, have a sufficient amount of wind resources to power the entire U.S., without even taking into account the ample remainder of onshore wind resources that are available in the other states in the

"U.S. Wind Corridor" extending from the north of Texas to the upper Midwest.

If the U.S were sourcing its electricity from these cheaper renewable sources----geothermal and onshore wind----then oil could be replaced in our transportation system by 100% sustainably sourced electricity that could, at the same time, run all of our cars, buses, trucks, and trains.

Thank you for your serious and unbiased consideration of these important issues which will affect us all in coming years. Again, I want to stress that your work surrounding natural gas regulation has not been in vain. It has allowed time to pass while other critical information could be gathered. It has allowed for new studies to be initiated, which will further inform the debate. But I believe this is a dead end street, and that NY is not the place for natural gas to be harvested.

Sincerely,
Gay G

Dear Governor Cuomo,

I am not going to tr to re write Mr Hang's letter to you. He expresses my concerns in detail and completely.

I own a small home and 10 acres of land with wilderness views. It is 10 miles outside of Ithaca on a hill that is part of the rim of a Piedmont valley. With the exception of an occasional vehicle or falling tree limb, there is no sound on the hill but the wind in the leaves, and the birds. The air is clean and smells differently in all four seasons and with weather changes even throughout the day. I invite you to be my guest with your family and enjoy all the wildlife that can be seen on a regular basis from my new addition. There is a spring below the house and many species of local wild residents take the opportunity to drink there. I also invite you all to a big glass of sweet water from my well which is the only water supply. I will make the same offer if the hydrofracking changes my area, without my consent, coming like a thief underground and destroying my water supply, filling the air with fumes and killing the wildlife with the toxic waste. Which visit would you rather have? Which conditions would you rather live with?

I bought that land in my early twenties with my mother's small life insurance policy in 1974. Regardless of my financial circumstances, I paid the taxes and have steadily built and made improvements on the house. That and my education (which is paid for) have been my major investments. What do you advise me to do if the water becomes flammable, as it has so close by in PA? When the rigs and the short term employment for out - of - towners are gone and I have poisoned water, poisoned land and poisoned air, what do you recommend I do? My property and the property around me will be worthless. The water shed goes to Cayuga Lake which will be toxic. The Fingerlakes tourism and agricultural economy will be gone and the only money being made will be for the gas companies. Please don't do that to Central New York. Watch the documentary Gasland, read the information and make the courageous choice. Wait until science (that will not profit financially) develops a technology is truly safe. Gas is not clean or cheap if it ruins the environment, neighborhoods, home owners and local economies.

I wish the best for you and your family. The invitation to my small home is real. The water is great.....

Very best regards.

Esther H

June 17, 2011

Honorable Joseph Martens

Commissioner

New York State Department of Environmental Conservation

625 Broadway

Albany, NY 12233-4500

Dear Commissioner Martens:

Below is a letter that I have read carefully and would like to support. **However**, rather than simply adding my name to the ideas, information, and references that are written into this letter, I would like to preface the information and associated perspective with a simple thought or two.

The fundamental difference between short term problem solving and responses to this issue that attempt to embrace futures are at the center of this controversy and may represent the most pivotal aspect of decision making in this realm.

Given current economics and infrastructure, it may make the most economic sense to do whatever is possible to provide more fuel to our society, when looked at as a solution over the scale of the next decade or two.

Long term decision making, on the other hand, would attempt to look at "what ifs" that include cost projections responding to water tables inadvertently contaminated and so necessitating the provision and

distribution of potable water to those inhabiting the north east over the next centuries (supplying drinking water, water for live stock, and water for food production). I have not begun to generate such numbers, but would hope that you have, given your pivotal position.

Even a short term perspective begs the inclusion of short term costs. How much water will be transported? What will the cost (economically and regarding CO2 emissions and climate influence) of such transport? Where will the fluids used be stored? Processed? And into whose watershed will they ultimately be released?

Having worked with Jim McCarthy of Harvard, Bruce Bauer of NOAA, and Tom Boden of Oak Ridge National Lab's Carbon Dioxide Information Center, it is fundamentally clear that our use of hydrocarbon fuel is quickly altering the climate of our planet. If you keep up with the projections being put forth by James Hansen, the picture is not one that you would want to share with your grand children. This is not hypotheses, this is what is happening.

The argument that the methane that would come from hydrofracturing will help all of this as a transition fuel, is fundamentally weak. It does

not stand up to scientific scrutiny based both on the amount of energy needed to access it (even without care) and the percent loss of a greenhouse gas with approximately 20 times the greenhouse potential per molecule.

Even if this were not the case, there is the essential question of duration.... How long the energy accessed through this process will actually last and how this will help our future. Despite the fact that fossil fuel hydrocarbons are extremely dense in caloric content, the entire hydrofracturing initiative is fundamentally short sighted: lots of energy for a very short period of time, huge potential loss and associated costs that could easily outlive the projected gains, and a total lack of "next phase" infrastructure established as an integral long term sustainable strategy.

There is apparently a lot of energy sitting under our communities. There is also a lot of energy sitting above them. One initiative is intensely short term in its orientation and leaves our children and their children's future (if the best science that the planet has to offer is in the ballpark) in total disarray. You are in a pivotal position, one that can change the course of history right now.

Dan F

June 17, 2011

Honorable Joseph Martens
Commissioner
New York State Department of Environmental Conservation
625 Broadway
Albany, NY 12233-4500

Dear Commissioner Martens:

I am writing today to request that the New York State Department of Environmental Conservation (DEC) immediately expand the scope of its efforts to revise the draft Supplemental Generic Environmental Impact Statement (SGEIS) pursuant to Executive Order No. 41. I am a rural homeowner and very concerned about the strong potential for hydraulic fracturing to pollute my private well. My home is less than one mile from a newly drilled well that will likely be "fracked" if allowed by NYS. I do not have resources to have my water repeatedly or even thoroughly tested for the 500+ chemicals that can be found in "frack fluid". For this process to be allowed in NYS, it needs to be proven safe with substantial remedies for any pollution of our clean water. Without available recourse, this is not a safe technique to be used in NYS.

With that goal in mind, I write to request that DEC address the issues described below.

I understand that DEC has been ordered to complete its revision by 7/1/11. The original draft SGEIS received such scathing criticism that Executive Order No. 41 was necessitated. I have never heard of a regulatory do-over of this magnitude in recent decades. I respectfully urge DEC to complete its revision without regard to any arbitrary deadline.

Executive Order No. 41

Just before leaving office, former Governor Paterson acknowledged the shortcomings of the draft SGEIS by signing Executive Order No. 41. It requires DEC to:

"complete its review of the public comments, make such revisions to the Draft SGEIS that are necessary to analyze comprehensively the environmental impacts associated with high-volume hydraulic fracturing combined with horizontal drilling, ensure that such impacts are appropriately avoided or mitigated consistent with the State Environmental Quality Review Act (SEQRA), other provisions of the Environmental Conservation Law and other laws, and ensures (stet) that adequate regulatory measures are identified to protect public health and the environment;"

DEC stated that its review and revision efforts would be limited to comments received prior to 12/31/09. You met with citizens on 3/23/11 to discuss a coalition letter that asks Governor Cuomo to require public comment in order to pinpoint all the technical, scientific, regulatory and legal issues that have come to light during the last 18 months.

An Associated Press (AP) article quoted you on the record saying: "'Some people say we should reopen the process. We're looking at all of that,' Martens said. 'We're trying to solicit and digest all the information we can and put it into a document that addresses all the concerns raised to date [emphasis added]. It's a really formidable task.'

Martens said New York's permitting guidelines will address problems that have been seen in other states, particularly Pennsylvania, where Marcellus Shale drilling and fracking has been blamed for contamination of water wells and rivers [emphasis added].'"

See:

<http://www.toxicstargeting.com/news/2011-05-23/ap-interview-ny-drilling-...>

Specific Requests for Immediate Action

I urge you fulfill your promise to require DEC's revision of the draft SGEIS to address all Marcellus Shale horizontal hydrofracturing concerns "raised to date," including the following specific matters.

1. There are nearly 11,000 signatories to a coalition letter that

asked Governor Paterson to withdraw the fatally-flawed draft SGEIS and send it back to the drawing board. That letter documents a wide range of fires, explosions, polluted water supply wells, homes evacuated due to natural gas intrusion and massive gas drilling wastewater spills that still exceed clean up standards decades after occurring.

The letter also requests that the Governor address a wide range of concerns regarding inadequate gas release disclosure requirements, lack of financial surety to address gas hazards, failure to impose strict liability for clean up of gas hazards and the failure to establish a dedicated gas pollution clean up fund comparable to the spill remediation fund. Please address all those issues in DEC's revision.

See: http://www.toxicstargeting.com/MarcellusShale/coalition_letter

2. DEC excluded from the SGEIS proceeding a wide range of critical issues that were identified at its scoping hearings. I request that DEC re-assess those comments in light of developments since 2008 and include all concerns deemed to be within the scope of Executive Order No. 41.

3. The U. S. Environmental Protection Agency submitted extremely detailed comments regarding the inadequacy of the draft SGEIS and requested that DEC share co-lead agency status with the New York State Department of Health. EPA also wrote that DEC's 1992 GEIS is out-of-date in so many respects that it should not serve as the basis for developing new horizontal hydrofracturing regulations.

EPA specified numerous fundamental shortcomings, including: potential impacts to public health, water supply, water quality, wastewater treatment operations, local and regional air quality, management of naturally occurring radioactive materials and cumulative environmental impacts.

EPA's letter states: "EPA recommends that these concerns be addressed and essential environmental protection measures established prior to the completion of the SEQRA process." Given the enormous array of shale gas developments since 2009, EPA Administrator Lisa P. Jackson has been asked to update EPA's comments. I ask DEC to address all of EPA's concerns in the revised draft SGEIS.

See:

<http://www.toxicstargeting.com/MarcellusShale/documents/comments/2009/31...>

See: <http://www.toxicstargeting.com/node/6729>

4. EPA is conducting a National Hydrofracturing Study. EPA Administrator Jackson has been asked to provide DEC with all pertinent documents compiled for that investigation. I request that DEC review those documents and address all concerns deemed within the scope of Executive Order No. 41.

5. The New York Times recently published a landmark three-part series about Marcellus Shale Gas wastewater hazards. That investigatory effort compiled more than 30,000 pages of documents, including, but not limited to: extensive gas drilling wastewater monitoring results, legal orders to halt gas drilling wastewater discharges to Publicly Owned Treatment Works, environmental assessments of gas drilling wastewater impacts on water quality and hundreds of EPA and State government documents detailing high concentrations of Total Dissolved Solids (TDS), petroleum hydrocarbons and radionuclides in gas drilling wastewater. I request that DEC review all those documents and address all concerns deemed within the scope of Executive Order No. 41.

6. Natural gas wastewaters have been documented to contain TDS up to 413,000 parts per million, Total Petroleum Hydrocarbons in the diesel range up to 72,600 parts per billion and a broad range of Radionuclides. These persistent pollutants can "pass through" "secondary" wastewater treatment systems, concentrate in residual sludges and cause worker hazards. I request that DEC review these data and address EPA's technical recommendations in its review. See pages 7-18 at:

http://www.toxicstargeting.com/sites/default/files/pdfs/docs_110303.pdf

7. According to the draft SGEIS, "Flowback water recoveries reported from horizontal Marcellus wells in the northern tier of Pennsylvania range between 9 and 35 percent of the fracturing fluid pumped [emphasis added]." (See page 5-97.) Those meager recovery rates lead to the conclusion that horizontal hydrofracturing constitutes deep well injection of fluids that could threaten drinking water supply sources. DEC requires State Pollutant Discharge Elimination System (SPDES) permits for deep well injection of natural gas fluid. Those permits can only be granted on the basis of site-specific, individual EIS reviews.

Given DEC's long-standing policy, I request that Marcellus Shale horizontal hydrofracturing permits be subject to individual EIS proceedings instead of a Supplemental GEIS. DEC is requiring individual EIS reviews for the New York City and Syracuse watersheds. I believe all New Yorkers who drink water drawn from unfiltered groundwater sources in the Marcellus Shale formation must be afforded

equal protection in every aspect of the letter and spirit of New York law. I request that DEC adopt that policy in its revised draft SGEIS.

8. I request that all discharges of gas drilling wastewater, including flowback as well as "produced" or "brine," to groundwaters be subject to New York State's GA (groundwater that supplies potable drinking water) effluent limitations. I ask DEC to adopt that policy in its revised draft SGEIS.

9. DEC concluded in its Final SGEIS Scope: "In the absence of a pattern of incidents that indicates a regulatory weakness or gap, the occurrence of isolated accidents or violations do not of themselves constitute reason to re-open the GEIS [emphasis added]." (See 8.3.2.)

DEC's assertion is directly contradicted by hundreds of spills reported to the agency as well as additional information compiled by Chautauqua, Cattaraugus and Allegany County Health Departments.

On November 9, 2009, detailed DEC spill information was released for public review that identified more than 270 incidents involving drill rig fires, explosions, homes evacuated due to gas drilling hazards, polluted water supply wells, gas drilling wastewater spills and various other oil/gas releases that had not been cleaned up. Many of those problems have exceeded remediation requirements for decades.

See: http://www.toxicstargeting.com/MarcellusShale/drilling_spills_profiles

On April 5, 2010, extensive information was released for public review that documented widespread natural gas impacts reported by the aforementioned health departments pursuant to a Memorandum of Understanding with DEC. Dozens of these problems were reported prior to the adoption of the GEIS in 1992 and have not yet been cleaned up.

See:

http://www.toxicstargeting.com/MarcellusShale/documents/chautauqua_catta...

I request that DEC review these two sets of government data and revise its 1992 GEIS to address all reported environmental and public health concerns. I request that the revision be completed prior to adopting a revised draft SGEIS.

10. I request that DEC investigate its claim that: "No known instances of groundwater contamination have occurred from previous horizontal drilling or hydraulic fracturing projects in New York State [emphasis added]." (See: DEC Marcellus Shale homepage.)

See a videotaped interview with Mr. David Eddy, a resident of

Independence, NY, who described how his drinking water supply well and house were reportedly impacted by toxic contamination caused by the hydrofracturing of a gas well across the street from his home:
http://www.toxicstargeting.com/MarcellusShale/videos/andover_independenc...

A U. S. Energy document is available for your review that reports toxic contamination of Mr. Eddy's water well, notes that the firm paid for a water treatment system and "put Mr. Eddy and his family in a hotel several nights during the initial impact." That document also discloses "U. S. Energy has offered Mr. Eddy compensation which he has refused."

See: http://www.toxicstargeting.com/sites/default/files/pdfs/us_energy.pdf
and
http://www.toxicstargeting.com/sites/default/files/pdfs/allegany_county.pdf

I request that DEC address Mr. Eddy's incident in its revision of the draft SGEIS.

11. Governor Cuomo has been alerted to extremely serious mortgage lending impacts reportedly associated with gas leases. Problems associated with real property devaluation and marketability could cause catastrophic economic troubles throughout New York. I request that DEC address this critical issue in its revision of the draft SGEIS.

See:
<http://www.toxicstargeting.com/MarcellusShale/alerts/natural-gas-leasing...>

12. A 1996 DEC investigation determined that: "New York State oil and gas production equipment and wastes are not significantly contaminated by naturally occurring radioactive materials (NORM). The concentrations of NORM found on oil and gas production equipment and wastes pose no threat to the public health and the environment. The research and analysis supporting this conclusion were performed in 1996. Direct measurements of the radioactivity at well sites were performed. Samples of scales, sludges, sediments, soils, water, rock, brines, waxes, and oils were taken and analyzed by gamma spectrometry."

See: <http://www.dec.ny.gov/chemical/23473.html>

These conclusions are contradicted by radionuclide data referenced by EPA: "such concentrations are considered elevated and many pose unacceptable human health risk mainly via external exposure, inhalation of radon and thoron decay products, and to some degree via

inadvertent ingestion. Although, most states have not yet formally classified oil and gas drill rig personnel as occupational radiation workers, at least health and safety measures should be considered to educate the personnel about radiation exposures and reduce their exposure to as low as reasonably achievable. The pipe scale and filter media could be the major sources of radiation exposure and need to be handled and disposed of appropriately."

See page 8 at:

http://www.toxicstargeting.com/sites/default/files/pdfs/docs_110303.pdf

I request that DEC address these concerns in its revised draft SGEIS.

13. Governor Cuomo received a 4/7/11 letter requesting that he bar the discharge of gas drilling wastewaters into Publicly Owned Treatment Works in the Finger Lakes Region of New York that are neither designed, constructed, maintained nor regulated to be able to handle those contaminated materials. Gas drilling wastewaters have been prohibited at POTWs in Pennsylvania and Ohio. I request that DEC address this concern in its revised draft SGEIS.

See:

<http://www.toxicstargeting.com/MarcellusShale/documents/letters/2011/04/...>

14. Among the most disconcerting EPA documents obtained by The New York Times is a Regional Administrator Briefing Overview that contains a recommendation for a gas drilling moratorium in the New York City Watershed. See page 16 at:

http://www.toxicstargeting.com/sites/default/files/pdfs/docs_110303.pdf

A recent article quoted EPA Region 2 Administrator Judith Enck: "I was at EPA Region 2 when we were preparing our comments, and there was a debate on whether or not to call for a moratorium on hydrofracking in the New York City watershed," Enck said. "And there was a difference of opinion. Some people did, some people didn't." See:

<http://www.wnyc.org/articles/wnyc-news/2011/apr/15/its-possible-albany-w...>

See below a 12/24/09 email sent by Mr. Phil Sweeney. It notes: "For the New York City watershed, we recommend that a precautionary approach be taken, and that a moratorium be established... [emphasis added]."

EPA evidently reversed its position on imposing a New York City gas drilling moratorium between when Mr. Sweeney publicly reported the moratorium on 12/24/09 and when Region 2 submitted formal comments to DEC on 12/30/09. I request that DEC investigate EPA's rationale for

imposing the proposed moratorium and address that concern in its revision of the draft SGEIS.

From: "Sweeney.Philip@epamail.epa.gov"
Sent: Thu, December 24, 2009 9:55:56 AM
Subject:

I am writing to notify you that EPA Region 2 has provided comments on the NYSDEC draft Supplemental Generic EIS for Well Permit Issuance for Horizontal Drilling and High-Volume Hydraulic Fracturing to Develop the Marcellus Shale and Other Low-Permeability Gas Reservoirs.

One concern included in EPA's letter is that the analysis of cumulative and indirect impacts should be significantly expanded. We also recommend that a greater emphasis be placed on potential adverse health impacts. For the New York City watershed, we recommend that a precautionary approach be taken, and that a moratorium be established, which could be followed by a phased permitting plan which would limit the intensity and impacts of drilling activity. In addition to these highlights, the letter includes technical comments on issues including air quality, water quality, habitat protection, and radioactivity.

A press release about EPA's comment letter will be issued today, and a copy of the letter will be available on our website:
<http://www.epa.gov/region2/>

Philip Sweeney
EPA Region 2
NYC Water Supply Protection Team
Phone: 212.637.3780
Fax: 212.637.3887

15. I request that DEC address inadequate staffing and funding concerns documented in this internal memo as part of its revision of the draft SGEIS:
http://www.toxicstargeting.com/sites/default/files/dec_dobletter_Grannis...

16. Finally, a coalition letter with more than 5,000 signatories has been sent to Governor Cuomo to request a public comment period to address how the scope of the draft SGEIS must be expanded to include concerns that came to light after the proceeding began nearly three years ago. I request that DEC respond favorably to that request. Accepting written comments ad hoc is a poor way to "solicit input" on

an important matter that could have irreparable impacts on New York's environment, public health and economy.

See: http://www.toxicstargeting.com/MarcellusShale/cuomo/coalition_letter

At least 64 Legislators are signatories to a similar letter to Governor Cuomo.

See:

<http://www.toxicstargeting.com/MarcellusShale/documents/letters/2011/04/...>

Conclusion

In conclusion, Executive Order No. 41 is an historic effort to require DEC to make sure that the environmental impacts associated with Marcellus Shale horizontal hydrofracturing are "appropriately avoided or mitigated" prior to the permitting of that activity. The concerns I respectfully ask DEC to address would help achieve that goal and serve as a model of effective government regulation for the nation as a whole.

I trust you will find my concerns self-explanatory. Thank you very much for your consideration and for your continuing public service.

Very truly yours,

Peter R



June 16, 2011

The Honorable Joseph Martens
Commissioner
New York State Department of Environmental Conservation
625 Broadway
Albany, New York, 12233

RE: Expanded Scope of Proposed Supplemental Generic Environmental Impact
Statement for Oil, Gas, and Solution Mining

Dear Commissioner Martens:

Greetings from Cooperstown, New York. Otsego 2000 is a grassroots organization that has worked for more than 30 years to protect the unique historic, cultural, scenic, agricultural, and environmental assets of the Glimmerglass region and greater Otsego County. This region is home to the Baseball Hall of Fame, the Glimmerglass Festival, Glimmerglass Historic District, Glimmerglass State Park, the New York State Historical Association, the Fenimore Art Museum, and numerous other historic sites of state and national significance.

We are located on the shores of Otsego Lake, which is the headwaters of the historic Susquehanna River, and the largest deep water lake in the Susquehanna River Basin. Otsego Lake supplies drinking water to more than 500,000 thousand visitors and residents each year. The region still reflects a highly integrated historic farming landscape because its assets have been protected from heavy industrialization for generations. Significant private and public investment has been made in preserving this environment and in building an economic base consistent with its historical roots. These include farming, educational institutions, museums, health care services and a strong second home market, which depends on recreational uses, such as hunting and fishing.

Otsego 2000 is also a founding member of a strong local coalition know as the Citizens Against Unsafe Drilling, now numbering more than thirty community groups and representing literally thousands of citizens who are working together to protect our local economy from shale gas industrialization. The local Chamber of Commerce strongly opposes gas drilling in the region and is supported by more than 400 businesses that are also opposed, including Bassett Healthcare Network, The Baseball Hall of Fame, the New York State Historical Association, and Brewery Ommegang.

It has now been almost 18 months since Otsego 2000 submitted detailed comments on the dSGEIS to the Department. At that time, we maintained that the dSGEIS was woefully inadequate, both factually and legally, to support the proposed action. Since those comments

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www.otsego2000.org*

were submitted at the end of 2009, much more has been learned and many more facts have come to light which have strengthened our concern and demand for caution.

As you know, New York law requires the Department to undertake environmental review before activities that may negatively impact the environment are approved. This includes the conduct of a full cumulative impacts analysis. The importance of cumulative impacts analysis was recently highlighted by the New York State Attorney General Eric Schneiderman, who sued the United States Army Corps of Engineers and others for failing to conduct an independent study of the cumulative impacts of gas drilling in the Delaware River Basin.

We urgently request that you expand the scope of the draft SGEIS to include a full cumulative impact analysis with respect to the entire life cycle of hydraulic fracturing in tight shale formations in both vertical and horizontal wells. This analysis must include scientific study of the anticipated cumulative impacts on human health, the environment, and the economy. It must also take the required “hard look” at all alternatives, including the alternative to prohibit these practices altogether, until better extraction technology is developed. You have said you will take the time necessary to do this right. You must now act on those words.

Having studied the issue in depth, and being familiar with its potential to inflict severe negative impacts on our region, we urge you to consider the following points, which have become apparent since the public comment period closed, in any revision to the dSGEIS:

- 1) The New York State Department of Health (DOH) has recently conducted the first public hearings on the potential adverse health effects of gas extraction through fracturing with massive chemical injection. In light of these hearings, we believe the DOH should become a co-lead agency in this environmental review, and the full record of its proceedings should be incorporated into the dSGEIS. There is growing evidence of health impacts from around the country that warrants additional scientific studies on human and animal health before hydraulic fracturing with chemical injection is allowed to proceed.
- 2) The original 1992 GEIS (which the dSGEIS purports to supplement) is seriously outdated. It was developed before the modern extraction process in tight shale was invented. New technologies that were not considered in the 1992 document, which have a potential negative impact on the environment, cannot be permitted under the generic provisions of the 1992 GEIS. Thus, new practices can only be permitted on the basis of site-specific review. In fact, the 1992 GEIS states that its generic provisions apply only to “standard” wells, defined as wells which do not require the use of “artificial stimulation” to facilitate the recovery of hydro-carbons. Thus, extraction of gas from tight shale through hydraulic fracturing in vertical or horizontal wells was not considered in 1992. The current dSGEIS must be expanded to update the 1992 GEIS in its entirety with respect to vertical and horizontal fracturing in tight shale (see attached memorandum regarding fracturing in vertical wells). These issues are also raised in the Petition for Declaratory Ruling submitted to the Department in May by Advocates for Cherry Valley.
- 3) The dSGEIS would permit a multi-well pad every square mile. This will fragment forests, farmland, and rural communities, and thus have a drastic negative impact on the environment. Recent studies prepared by land use experts document the irremediable damage that will be done. Please see, for example, the build-out analysis prepared by Ted Fink of Greenplan, Inc. for Middlefield, the largest township in Otsego County. This is representative of what would occur in the whole region. The build-out analysis convincingly demonstrates that there will be

catastrophic loss of farm acreage should these extraction processes be allowed to proceed. We urge you to include the study of these impacts in a revised dSGEIS.

- 4) Several towns in our region have now adopted laws and ordinances that prohibit heavy industrial practices. The dSGEIS repeatedly informed the public that mitigation would be required with regard to local road use, noise, wetlands protection, flood plain protection, agricultural district protection, historic site protection, sensitive site protection, safety and emergency response and other issues. However, the dSGEIS was utterly silent with respect to enforcement procedures and did not clearly state that applications for drilling permits must be in compliance with all applicable local laws. This has led to considerable confusion about the rights of local governments to act to protect their citizens and communities. Any revised dSGEIS should specifically clarify that home rule will be respected in New York State and that permits will not be issued which are inconsistent with local zoning, police power, and/or land use laws.
- 5) The recent release of documents by the *New York Times* also demands further study and the expansion of the scope of the dSGEIS. The documents disclosed by Mr. Ian Urbina in his series of articles published this spring reveal that neither New York nor neighboring states have facilities to treat the billions of gallons of hazardous wastewater containing radioactive materials and known human carcinogens that will flow back after a gas well is fracked. The facilities currently being used simply dilute the hazardous waste products before releasing them into rivers that are then used as a source for drinking water. How many billions of gallons of such contamination can our water systems absorb before serious negative effects on health will be manifest, and what will the clean up costs be? The dSGEIS must be expanded to answer these questions before it is submitted for further public comment.
- 6) The dSGEIS was presented for public comment based on the assertion that a “generic” set of rules would apply throughout the State. After the public comment period closed, the Department, without notice to the public or any supporting data, reversed course and granted special protections for the New York City and Skaneateles watersheds. The public must be informed about why this change was made, must be given access to the scientific data on which this decision was based, and must be allowed a period of full public comment on this alteration. Further, any evidence that the New York City or Skaneateles watersheds can in fact be protected if massive fracturing is occurring just outside their borders must be included in any revised dSGEIS.
- 7) The dSGEIS contained another serious error that misled the public and tainted the entire public comment process. The draft, on its face, stated that there have been no incidents of groundwater contamination attributed to hydraulic fracturing anywhere where the process has been tried. These statements were made based on testimony from other states. However, they were inaccurately reported as they did not refer to the life cycle of the drilling process. See, for example, the attached comments Otsego 2000 submitted to the EPA in September 2010. Based on developing data, compiled since the public comment period closed, we now know that there are serious, documented claims of contamination of drinking water throughout the country where these practices have been used. The scope of the draft SGEIS must be formally expanded to analyze this data.
- 8) The scope of the draft SGEIS must also be expanded to address the actual projected economic impacts on the state. Evidence is mounting that the gas industry transforms the economy from existing economic uses to an extraction economy. If tourism, agricultural, and recreational uses

of the land are destroyed, what economic impact will this have on the state? It has also recently come to our attention that gas drilling threatens the housing market because many banks will not underwrite loans if there is a gas lease on the land, or on adjoining parcels of land. If people cannot obtain mortgages and insurance because of gas drilling, how much will the state lose? Finally, the true costs of future environmental clean-up and health care expenses must be factored in.

Whatever instructions the Department may have received to complete the revised draft on a particular schedule, the truth is that the Department must be allowed to work on a schedule that is reasonable in light of the developing factual and scientific record. Any scientific endeavor must adjust its plans based on newly discovered facts and evidence. Please take immediate action to expand the scope of the dSGEIS, before releasing any further revision.

Respectfully submitted,



Nicole A. Dillingham
President, Board of Directors

Attachments: Petition for Declaratory Ruling filed by Advocates for Cherry Valley
Otsego 2000 Memorandum re: Vertical Wells
Land Use Analysis for Town of Middlefield, Greenplan Inc.
Otsego 2000 Comments to the EPA, September 2010

cc: The Honorable Judith Enck
The Honorable Kirsten Gillibrand
The Honorable Charles Schumer
The Honorable Richard Hanna
The Honorable James Seward
The Honorable Marc Butler
The Honorable Peter Lopez
The Honorable William Magee
The Honorable Joseph Boan