

DRAFT

ISSUES DOCUMENT REGARDING:

DRAFT SUPPLEMENTAL GENERIC ENVIRONMENTAL IMPACT STATEMENT (dGEIS) ON THE OIL, GAS AND SOLUTION MINING REGULATORY PROGRAM (NY)

(Well permit issuance for horizontal drilling and high-volume hydraulic fracturing to develop the Marcellus Shale and other low-permeability gas reservoirs, September, 2009)

BY: Michael Lebron and Stanley Scobie, principals:
New Yorkers for Sustainable Energy Solutions Statewide

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Wednesday, Dec 2, 2009

This is a working paper about the Marcellus dSGEIS. It is not a comprehensive critique/comment on the dSGEIS. The specifically analyzed issues here are consistent with the attached letter (draft from NRDC et al that calls for the dSGEIS to be withdrawn and re-drafted). Rather than provide an integrated narrative we simply report separately six issues that we believe merit considerable further analysis.

ONE

Industry confidence in knowledge about “unconventional” natural gas development.

(From a presentation, 7-21-09, by Professor Mark Zoback, Geophysics, Stanford University; data from a survey (101 responses from 400 attendees at an industry conference “Shale Gas Production Conference” (2009)).

- A.** “How confident are you in understanding of reservoir drainage?”
- | | |
|-----------|-----|
| Very: | 8% |
| Not very: | 80% |
- B.** “How confident are you in “Expected Ultimate Recovery” (E.U.R.) of a gas well?”
- | | |
|-----------|-----|
| Very: | 8% |
| Not very: | 80% |
- C.** “Do you think new “completion” (fracturing etc) technology is needed?”
- | | |
|------|-----|
| Yes: | 83% |
| No: | 5% |
- D.** “Do you think new drilling technology is needed?”
- | | |
|------|-----|
| Yes: | 72% |
| No: | 11% |

IMPLICATIONS

One plausible interpretation of these data is that “unconventional” (Marcellus-type) natural gas extraction is very much a developing, trial-and-error, technology rather than a mature, clearly science-based set of procedures. Thus, assertions about “facts” and “science” applied to unconventional natural gas extraction must be viewed with great caution. Given the developing picture of hazards, negative impacts, apparent community disasters, and other unintended consequences with unconventional gas, prudence dictates that permitting of gas development must proceed with extreme care.



TWO

Coherence and competence of NY Department of Environmental Conservation (DEC) to adequately supervise and monitor unconventional natural gas extraction at this time.

There are several things that raise great concern.

A. Prior to passage of the 2008 amendments to NY Environmental Conservation Law (ECL 23), DEC officials insisted that they could adequately control these relatively new methods of extraction.

However, there came to be an understanding that existing environmental controls (mainly the 1992 Generic Environmental Impact Statement) were inadequate, and DEC set out to develop a revised supplemental set of policies and procedures for high-volume, horizontal hydrofracture extraction (the current dSGEIS).

B. Prior to the publication of the dSGEIS (September, 2009), a F.O.I.L. investigation by Deborah Goldberg, Managing Attorney, Earthjustice, NY, NY., found that DEC had no system for recording and evaluating gas drilling-related incidents and accidents and thus could not credibly make the assertion “no problems.” It appears to be a “don’t ask, don’t tell” situation.

Recently, Walter Hang, Toxics Targeting, Ithaca, NY, was able to data-mine DEC records and discovered 270 previously unacknowledged serious drilling-related incidents - gas migration, toxic spills, etc. This calls seriously into question assertions that existing controls, upon which the dSGEIS relies, are adequate.

C. The dSGEIS suggests radioactive waste from drilling is not a health hazard. However, an analysis by the NY Department of Health (DOH) done earlier this year suggests otherwise.

The radioactive substances that are by-products of Marcellus drilling called Naturally Occurring Radioactive Substances (NORMS) may be more potent than in other similar shales, may pose health problems for drilling workers who are in fairly close contact, and almost certainly pose major waste disposal problems. Apparently no current methods of waste disposal within NYS can handle this stuff: see “Is New York’s Marcellus Shale too Hot to Handle” (A. Lustgarten, ProPublica, 11-9-09).

D. The NY DEC and knowledgeable legislators have indicated that staffing levels are probably woefully inadequate to handle well and in a timely manner the likely rush of drilling permit requests.

IMPLICATIONS

Taken together, the above two points about the ability of the industry to understand well the implications of its activities, and the ability of the NY DEC to develop and enforce procedures adequate to protect the environment, our water, and our health raise grave concerns.

Moreover, the current dSGEIS proposes only procedures and administrative policies, not regulations with teeth. Surely given the uncertainties about outcomes we would want clear, tight, and enforceable regulations as a base.





THREE

Energy Independence.

Here we simply quote a recent letter from Professor Edward Kokkelenberg, an economist, to NYS Senator Seward:

Thank you Senator, for your quick response to my letter expressing concerns about the drilling Draft SGEIS document. I look forward to your success in gaining a critical time extension as our local governments need this to craft intelligent comments.

I am puzzled though about your comments that the exploitation of this deposit will reduce our country's dependence on foreign oil. Both domestic and imported oil is used to produce gasoline, kerosene, jet fuel, and diesel fuel. This in turn is used in transportation such as autos, airplanes, ships, locomotives, and trucks. A modest amount of crude oil is used for chemical manufacture and a small amount of one of the distillation products for the generation of electricity. See http://tonto.eia.doe.gov/dnav/pet/pet_cons_wpsup_k_w.htm for the disposition of crude oil.

Some few of these can be fueled by natural gas; but the cost of converting the supply chain (service stations etc.) and the fuel burning equipment (natural gas burning autos etc.) is daunting; and the incentives to effect such a massive conversion are not in place. Some uses can only be produced by chemical conversion such as making propane based chemicals from the methane in natural gas.

Currently, natural gas is used for heating (home, stores, offices etc.), for the production of ammonia for fertilizers, and as an alternative to coal in the generation of electricity. See http://tonto.eia.doe.gov/dnav/ng/ng_cons_sum_dcu_nus_m.htm for the disposition of natural gas in the USA.

Thus, more natural gas will have no serious effect on our dependence on foreign oil.

Thank you,

Edward C. Kokkelenberg
Professor Emeritus, Binghamton University

FOUR

Severance Tax: How to pay for the "hidden costs" of natural gas extraction.

New York State has had and will continue to have some level of natural gas energy extraction. Sadly, oil and gas developers like to refer to NY as a "cheap date"; mainly because NY, almost alone among the oil and gas states, has no severance tax.

Such a tax, paid on the value of the resource removed, reflects the reality that natural resources, once removed, are gone – often leaving a mess behind. And, it reflects the concept that extractive industry should pay its fair and full share of costs.

Whether or not there is gas drilling in the New York City's watershed – and the Delaware River Basin that it is inextricably linked to – any natural gas extraction must pay its due bills at the point extraction occurs because this is the point at which most environmental and societal costs are incurred.

That is not the case now. The Department of Environmental Conservation – including the minerals division is funded almost completely through general revenue.

Proposals to increase permitting fees through legislation, although undoubtedly well intended, will quickly fall prey, as they always do, to inflationary price increases.

You can easily see this in current permit fees which cover only a very small fraction of real administrative and enforcement costs.

What is needed is a revenue source that adjusts to evolving costs, and is directed into a lock box for DEC administration, enforcement, and an adequate “super-fund”-type resource to acknowledge and be able to respond to what we know, with absolute certainty, will be the inevitable physical or financial catastrophes.

As an example of the many stories: this past year, the citizens of Cohecton, NY had to pick up the \$1.2 million tab for road repair, after the completion of the Millennium Pipeline, which came to \$900 for each of its 1,328 citizens.

A most tragic nearby example can be found in the town of Dimock, PA. PA Department of Environmental Protection said there was little to worry about, that remedial procedures were in place. They did not say there was no budget for meaningful enforcement, and with regard to the 8,500 gallon toxic spills at a well site, they were even heard to say that they had to “negotiate” with the polluter. There may be some truth to that as that first penalty, at \$56,650, comes out to \$6.74 a gallon. Cabot, the driller is currently under a consent order to remediate 13 water wells in a nine square mile area that PA DEP has deemed damaged by gas well drilling and development. Also, because of unresponsiveness of both PA DEP and the driller, Cabot, 15 residents have joined in a major lawsuit against Cabot.

IMPLICATIONS

Our point is simple: we look to NY to first and foremost protect our most precious natural resource—our water, and to assure that we don't foot the bill if and when it becomes compromised.

FIVE

Infrastructure.

A. Here we review the relation of pipelines and compressors to gas wells and production.

FIRST, the wells and the pipelines and compressors are joined at the hip — as has been very clearly recognized in both the NY Energy Plan (Aug., 2009) and in the current dSGEIS. It is artificial, inappropriate, and probably, under SEQRA, illegal to segment wells to DEC, and pipelines and compressors to the Public Service Commission (PSC). There are numerous examples in Chapter 6 of the dSGEIS where the DEC makes very clear why they must be treated together. This may require legislation to move some of the authorization under PSL, Article VII to ECL 23, so the DEC can reunite these bedfellows.

SECOND, in fact, both the NY Energy Plan and the dSGEIS make the argument that pipelines probably should be in place before or at the time of drilling. The reasons this is desirable:

1. Profitability - the quicker gas flows, the sooner the money flows.
2. Green completion - gas directly into pipelines reduces flaring and release of greenhouse gasses.
3. Clay in the shale - the only reason given in the Energy Plan. Early flowing reduces the likelihood of clogging.
4. ECL 23 asserts that State resources should not be wasted.



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THIRD, permitting of pipelines and compressors can involve eminent domain processes considerably more potent than those in ECL 23 - compulsory integration. The dSCEIS is silent about this issue of major importance to citizens in any decisions about gas wells. For example: we understand that pipelines shorter than 10 miles sometimes do not require even any public notice. Moreover, low pressure pipelines (less than 125 psi) are under no controlling authority - no permits are required, no inspection required, unodorized, no "Dig Safely NY" reporting required. We understand that records of these lines and maps are sometimes filed with local authorities, but this tends to rely on the memories of road superintendents, town supervisors, etc. These people mostly have shorter political lifetimes than the functional lifetimes of the pipes and the wells they serve. Years later operators digging in the area may have no way of knowing they are approaching a dangerous hazard.

We support treating pipelines and wells as an inseparable entity. We also assert that they must be treated together to satisfy SEQRA, avoid segmentation, and address cumulative impacts as the dSCEIS begins to do with regard to multiple-well pads.

FOURTH, there is the suggestion, in the NY Energy Plan, that pipeline infrastructure should be supported and facilitated. However, the issue is clear in the appended comments from "The Energy Association of New York State." "Support will be needed to develop the pipeline infrastructure to gather supplies from the wellhead as well as expand the transmission infrastructure to transport supplies to market (pg 4). And, "...critical that all funds currently available...be put to use...by utilities..." Subsidies can be given in a variety of forms, e.g., PILOT (payment in lieu of taxes) arrangements with Industrial Development Agencies. Pipelines will be organized as utilities. They will use eminent domain. We believe 'support' is code for subsidize. We interpret 'subsidize' as inappropriate corporate welfare. The energy companies have asserted, time and time again "...we ask for no tax breaks, no incentives, we come in and leave money on the table, and create lots of good-paying jobs." From a 10-15-09 news release from 'Unshackle Upstate': "The oil and gas industry wants to expand current operations in New York and, they are not seeking state assistance."

FINALLY, oil and gas operations are exempt from almost all local control (zoning, etc). This includes wells and the pipelines and related infrastructure. Thus, these industrial operations can move very freely into communities without much notice and with nearly no ability of communities that are or will be impacted to mitigate or eliminate hazards and negative impacts. We hope that the Legislature is up to the job of holding industry's feet to the fire, and holding their actions to what is fair and reasonable.

B. The DEC in the dSCEIS does not deal well with air quality and greenhouse gases (GHG) in large part due to being dismissive of the impact of fugitive emissions from compressors and related infrastructure, and not integratively addressing the important role of the Public Service Commission in this. We believe that this later failing is highly inappropriate segmentation and probably illegal under SEQRA.

First, understand that methane (natural gas) is an extremely potent GHG. Second, gas is unodorized (per the PSC/DPS) until city gate. That is, all the way from the well head to the compressor to the transmission lines, leak detection is difficult without special equipment (e.g., sniffers and infrared photography). Third, it is well understood that the leakage at valves, joints, and compressors is often considerable and typically undetected. Fourth, with leakage, there are also safety and air quality issues. Recent reports from DISH, TX and other Texas locations with similar high density of wells, pipelines, and compressors as expected in NY, make these health/safety points unfortunately all too clear.

SIX

Residential Real Estate Value.

While it has been common to view the Marcellus development as a “gold rush” that will be an unequivocal economic good, it is also very clear that there are costs. One potential cost is the risk to real property owners in the vicinity of gas wells. We note that it is not at all clear that all property owners wish to lease their land for gas drilling or indeed can do so.

We wish to draw your attention to a specific potential impact of natural gas leasing on residential real estate value. In the U. S. Department of Housing and Urban Development HANDBOOK 4150.2: Valuation Analysis for Home Mortgage Insurance for Single Family One- to Four- Unit Dwellings, July 1, 1999, page 20-21, 2-2 SPECIAL NEIGHBORHOOD HAZARDS AND NUISANCES:

A. UNACCEPTABLE SITES:

FHA guidelines require that a site be rejected if the property being appraised is subject to hazards, environmental contaminants, noxious odors, offensive sights or excessive noises to the point of endangering the physical improvements or affecting the livability of the property, its marketability or the health and safety of its occupants. Rejection may also be appropriate if the future economic life of the property is shortened by obvious and compelling pressure to a higher use, making a long-term mortgage impractical.

D. OPERATING AND ABANDONED OIL OR GAS WELLS

Operating and abandoned oil and gas wells pose potential hazards to housing, including potential fire, explosion, spray and other pollution.

1. Existing Construction

No existing dwelling may be located closer than 300 feet from an active or planned drilling site. Note that this applies to the site boundary, not to the actual well site.”

We draw your attention to the fact that current and proposed gas and oil guidelines in NY require only a 100-150 foot setback. Thus, under FHA guidelines certain “legal” gas well placements would make property ineligible for some loans.

We have been placing calls to mortgage officers in Broome and Sullivan County in New York, Wayne County in Pennsylvania, and Sussex County in New Jersey who are experienced in FHA loans, and Fannie Mae and Freddie Mac. Of the ones we have been able to speak to, half were familiar with the language in the HUD Handbook and interpreted it to mean that residential structures for sale that are within 300 feet of the boundary of any property that is leased for natural gas drilling is not eligible for insurance for FHA financing.

We have also been placing calls to real estate brokers in each of these counties to get a sense of what percentage of the market relies on FHA financing. So far, it is a little all over the map: for homes in the middle of the market that go for anywhere between \$110K to \$210K the responses have been between 20% and 70%. Even if we accept only the lower figure, it is clear that this greatly reduces the pool of eligible buyers for these homes with a pursuant reduction in value of no small significance for the seller.

This becomes problematic in the context of an energy regulatory agenda that involves compulsory integration with horizontal wells running beneath people’s properties. And in case you don’t think drilling does not occur in urban or suburban areas, we simply direct your attention to the Dallas/Ft. Worth area and Dish, Texas.



SUMMARY

We believe the six issues above, taken together, are completely consistent with and support strongly the conclusions of the following letter requesting that NY DEC withdraw the current Marcellus dSGEIS and redraft it.

LETTER TO GOVERNOR PATERSON

ADVOCATES FOR SPRINGFIELD • BINGHAMTON REGIONAL SUSTAINABILITY COUNCIL • CATSKILL CITIZENS FOR SAFE ENERGY • CATSKILL MOUNTAINKEEPER • CITIZENS CAMPAIGN FOR THE ENVIRONMENT • COMMUNITY ENVIRONMENTAL DEFENSE COUNCIL, INC. • CONCERNED CITIZENS OF OTEGO • CROTON WATERSHED CLEAN WATER COALITION • DAMASCUS CITIZENS FOR SUSTAINABILITY • DELAWARE RIVERKEEPER NETWORK • EARTH DAY NEW YORK • EARTHJUSTICE • EARTHWORKS' OIL & GAS ACCOUNTABILITY PROJECT • ENVIRONMENTAL ADVOCATES OF NEW YORK • LEAGUE OF WOMEN VOTERS OF NEW YORK STATE • NATIONAL WILDLIFE FEDERATION • NATURAL RESOURCES DEFENSE COUNCIL, INC. • NEW YORK PUBLIC INTEREST RESEARCH GROUP • NEW YORKERS FOR SUSTAINABLE ENERGY SOLUTIONS STATEWIDE • NORTHEAST ORGANIC FARMING ASSOCIATION OF NEW YORK, INC. • NYH2O • OTSEGO 2000 • RIVERKEEPER, INC. • SHALESHOCK CITIZENS ACTION ALLIANCE • SIERRA CLUB ATLANTIC CHAPTER • SUSTAINABLE OTSEGO • THEODORE GORDON FLYFISHERS, INC.

December 3, 2009

Governor David Paterson
Executive Chamber
State Capitol
Albany
New York 12224

Dear Governor Paterson:

We are writing to you on an issue of critical importance to all New Yorkers – how to assure the protection of the State's drinking water supplies and other irreplaceable resources in the face of a recently proposed Department of Environmental Conservation (DEC) program for industrial gas drilling that would employ risky new drilling techniques across New York State.

As you know, New York's water resources are among the state's most remarkable and irreplaceable natural assets. Across the state, public and private water systems provide our residents with clean and abundant drinking water at reasonable cost. And our streams and rivers, among many other benefits, offer unparalleled opportunities for recreation. Even without taking into account their ecological value, these water resources – which have benefitted from extensive federal, state and local clean-up programs and infrastructure investments over the past four decades – are essential to public health protection and the state's long-term economic prosperity.

Nevertheless, these state water resources will be confronting their greatest risk in many years if the pending proposal to drill in the Marcellus Shale – which would employ a controversial technology called "hydraulic-fracturing" – is allowed to proceed as currently envisioned in DEC's Draft Supplemental Generic Environmental Impact Statement (DSGEIS). This is not a purely theoretical risk. The use of hydraulic



fracturing has led to known or suspected contamination in water supplies across the country, including right next door in Pennsylvania.

The undersigned groups represent a range of environmental, public health, conservation and good government interests from Western New York to Long Island. Some of our organizations differ on the ultimate issue of whether, where and how drilling could be allowed to proceed in New York. But all of us agree on one point: the DSGEIS, which proposes to allow gas drilling using hydraulic fracturing in the Marcellus Shale and elsewhere in New York State, is fatally flawed and must be abandoned.

The DSGEIS fails to conform to the most basic requirements for such documents, as set forth in the State's Environmental Quality Review Act. For example, the document:

- Fails to include any meaningful assessment of the cumulative impacts of drilling assuming a reasonable worst-case full build scenario.
- Fails to include any meaningful assessment of alternatives, including limitations and/or prohibitions on drilling.
- Fails to properly consider the potential for contamination of drinking water supplies and aquatic habitats as a result of spills and/or subsurface migration of contaminants. The extent of this particular inadequacy has been recently underscored by Toxics Targeting's report identifying more than 270 drilling-related spills and accidents in New York.
- Fails to fully assess the significant potential air quality, traffic and noise impacts associated with widespread industrial gas drilling – in many cases relying on the earlier 1992 GEIS, which was itself significantly flawed.

Simply put, the analyses and conclusions presented in the current document do not provide a basis for any rational decision-making as to such fundamental questions as the safety of widespread hydraulic fracturing practices in New York.

For these reasons, we call upon you to take additional time to re-examine the implications of this hydraulic fracturing proposal and to ask that your Administration develop a new draft environmental statement and a comprehensive regulatory proposal that can more effectively balance the desire for natural gas extraction with the costs and risks of a widespread program of hydraulic fracturing.

Specifically, we respectfully urge you to take the following actions:

- (1) Direct DEC to set aside its current draft document and commit to a twelve month moratorium on the issuance of any new permits for hydraulic fracturing in the Marcellus Shale or similar formations in New York State.
- (2) Request that U.S. Environmental Protection Agency (EPA) Region II convene a panel of experts on water quality to analyze proposals for hydraulic fracturing in New York State and to assess the potential impacts of such



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activities on water resources in New York, utilizing the precautionary principle as the foundation for its analysis. If deemed appropriate, this could be coordinated with the larger new examination of the risks of hydraulic fracturing to be undertaken by EPA in accordance with the recently enacted provision sponsored by Rep. Maurice Hinchey.

- (3) Direct DEC to develop a new draft environmental impact statement that contains all appropriate and legally-required analyses and to propose a comprehensive rule-making package that would accompany the new draft and that would be designed to fully insure the protection of the state's most valuable water and other natural resources.

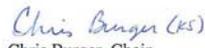
In sum, we believe that how you handle this issue will largely determine the environmental and public health legacy of your first Administration. We appreciate the difficult economic challenges facing New York State and recognize the enormity of the task of preparing a balanced state budget under these circumstances. But as New Yorkers have become aware of the implications and problems of hydraulic fracturing, their initial excitement has been replaced by apprehension, suspicion and growing demands for a new, precautionary principle-based approach to hydraulic fracturing. We firmly believe that it would be an error of historic proportions if the DEC were to push through an industrial hydraulic fracturing gas drilling plan in anything like its present form. Surely it is worth taking another twelve months to reassess and redesign this program, before taking steps that could place the state's priceless and irreplaceable resources in jeopardy.

We urge you in good faith – and with every hope of an environmentally sustainable and successful Paterson Administration – to provide the leadership this situation requires. We ask that you heed the outpouring of public comments on this complex issue and direct the preparation of a new draft EIS and proposed regulations that are fully protective and provide for a sustainable future for our state's water bodies and other ecological resources, so that the final program will truly be in the best long term interests of New York State, its natural resources and its 19 million residents.

Sincerely,



Harry Levine, President
Advocates for Springfield


Tracy Carluccio, Deputy Director
Delaware Riverkeeper Network

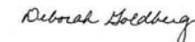
Chris Burger, Chair
Binghamton Regional Sustainability Council



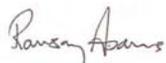
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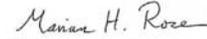


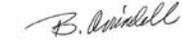
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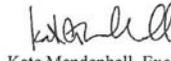

Betsy Swan, President and Roberta Wiernik, Natural Resources Specialist
League of Women Voters of New York State


Curtis Fisher, Regional Executive Director
National Wildlife Federation

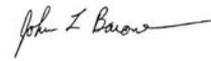

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cc: DEC Commissioner Alexander B. Grannis

