

Comments on Chapters 6, 7 and 8 of NYSDEC's Preliminary Revised Draft Supplemental GEIS

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The NYSDEC (DEC) has presented an impressive list of hazards associated with Horizontal Drilling and High-Volume Hydraulic Fracturing (HVHF) to Develop the Marcellus Shale and Other Low-Permeability Gas Reservoirs, i.e., "fracking" for short, with the goal of preventing contamination to NYS aquifers, reservoirs, streams, lakes and wetlands.

The proposed list, however, is unrealistic, misleading and incomplete for the following reasons:

1. The DEC's personnel are woefully understaffed and would be unable to enforce the myriad of strict regulations that should ensue from this prdSGEIS. Given the large number of applications for well drilling that will undoubtedly occur when the regulations are issued, the DEC would be forced to issue inadequately reviewed permits. Staff to monitor the well-drilling process itself is also lacking. Until such time as the DEC staff is adequately replenished, the regulations, no matter how strict, would be meaningless.
2. All fracking ingredients including "trade secrets", used at any time during the operation of a well, must be made public knowledge. The public's right to know and be informed of any ingredients that could threaten their health and that of their families, must take precedence over any financial benefit to a corporation. The DEC, in order to protect public health, should withhold issuing permits until all ingredients are made public. We are not a communist country like China where the government (here, the DEC) assumes the right to give out, or withhold, information to the public.
3. Despite frequent demands by several organizations for a cumulative impact analysis, the DEC still has failed to produce one. This failure contravenes SEQR that states as follows: under 617.9(b)(5)(iii)(a), all draft EISs must include "reasonably related short-term and long-term impacts, *cumulative impacts* (*emphasis added*), and other associated environmental impacts." DEC's continued refusal to include cumulative impacts could be actionable.
4. According to Appendix 13, many of the wells in the NY portion of the Marcellus Shale, show dangerously high levels of Radium-226, in some cases close to one thousand times the safe limit. Since Radium-226 has a half-life of close to 1,600 years (about 70 generations), the DEC must detail a plan on how to safely store it over that period of time.
5. The production brine that harbors radium-226 also contains heavy metals and high concentrations of salts. Spreading such dangerous products on roads and

fields should be prohibited. Instead, the brine should be classified as "hazardous waste" rather than an "industrial" waste and disposed of accordingly.

6. The setbacks proposed by DEC are, for the most part, seriously inadequate. The horizontal arm of the well pipe could stretch a least 4,000 feet from the well, with the possibility of longer horizontal arms in the future. For example, a separation of 500 feet of a private well from the drilling well could place the private well above the horizontal arm a drilling well. This is a ridiculously small separation (like two NYC blocks), if this heavy industrial enterprise is also compared to the 100-foot separation required between a passive septic tank and a well. Setbacks from the end of the horizontal pipe to the edge of primary and principal aquifers; New York State Forests, Parklands and Wildlife Management Areas; privately-owned wells and domestic-use springs; public drinking water supplies; agricultural lands, should be a minimum of 2,000 feet, and up to 4,000 feet, depending on the depth of the underlying shale layer. The shallower the layer, the more likelihood there will be that the explosive forces will open up pathways to an overlying aquifer, and the greater need for a wider buffer.
7. No pipelines carrying oil or gas should be permitted within primary and principal aquifers; New York State Forests, Parklands and Wildlife Management Areas; the watersheds of public drinking water supplies; and agricultural lands.
8. Pre-testing of all privately- and publicly-owned wells, and also streams, lakes and ponds, at least 6,000 feet from the drilling well, should be mandatory prior to fracking. These should be tested for all ingredients proposed to be used in the fracking process, including methane. Without such pre-testing, the burden of proof of contamination is on the well-owner rather than on the drilling company where it should be. Regular testing of such wells should be continued for a period of at least five years subsequent to fracking. The frequency of testing should depend on the proximity of the well to the drill pad.
9. Each applicant should be responsible for identifying any abandoned wells within one mile from the edge of their well pad, making sure that they are adequately sealed, and being responsible for their maintenance.
10. Agricultural lands should be strictly protected with a minimum of a one-mile setback.

COMMENTS ON CHAPTER 6

On page 6-13, under the "Water Resources" bill that was recently signed into law by Governor Cuomo, the DEC "would regulate all water withdrawals over 100,000 gpd throughout all of New York State".

How can the DEC expect to properly regulate water withdrawals, given their lack of manpower?

4.2 mgd is given as an estimate for the average amount of water needed per well for its fracking operations.

According to Fig. 6-2, page 6-12, fracking could require the withdrawal of up to 24.7 mgd - the total for NYS being about 718 mgd - a small amount (according to DEC) compared with other much larger demands from drinking water suppliers and the electrical industry. It is difficult to reconcile this relatively low figure for fracking with the fact that each well pad can sustain up to 8 wells, and that 16 well pads/square-mile are allowed in NYS. Over 15,625 square miles in NYS's Marcellus Shale are available for fracking. Clearly, 24.7 mgd under-estimates the amount of water that will be used for fracking.

"Current practice is to use 80% to 90% fresh water and 10% to 29% recycled flowback water for high-volume hydraulic fracturing..."

This "current practice" applies to the Susquehanna River Basin in Pennsylvania; it does not necessarily apply to NYS. And, if so, how will DEC regulate the disposal of the millions of gallons of fracking water that has been contaminated with produced water, containing brine and radioactive materials, in addition to flowback water?

Rather than having to deal with disposal, some companies have chosen to allow up to 80% of flowback water to remain underground. In NYS, this could mean that such practices will be regulated by the rules for "injection wells". In addition, DEC should be required to study possible migration routes that could result in these fluids contaminating aquifers.

Although DEC discusses the recycling of flowback water, it does not include in the same section a discussion of "produced waters", i.e., the brine, heavily salted and radioactive, that is brought up from the shale together with the rock drillings. Brine needs special disposal methods because of the unusually high levels of NORMS in NYS Marcellus shale that include Radium-226, an emitter of dangerous alpha particles, with a half-life of about 1,600 years, roughly 70 generations.

6.1.2 Stormwater Runoff

Prior to issuing a permit, the DEC should require a detailed erosion and sediment control plan pertaining to the new access roads and the drill pad itself. Post-construction storm water control plans should also be required to prevent storm water runoff from a drill pad, rendered impervious through the heavy construction work, and the hundreds of trucks carrying the necessary equipment and millions of gallons of water to the site.

6.1.3 Surface Spills and Releases at the Well Pad

NYS DOH "reviewed the composition of additives proposed for high-volume hydraulic fracturing in New York. NYS DOH (DOH) concluded that the proposed additives contain similar types of chemical constituents as the products that have been used for many years for hydraulic fracturing in New York.... DOH's review did not identify any potential exposure situations associated with horizontal drilling and high-volume hydraulic fracturing that are qualitatively different from those addressed in the 1992 GEIS."

What is wrong with this evaluation?

- 1. Not only the vastly increased amounts of the components used in horizontal fracking but also the relative amounts can, and often do, make a difference. In the case of horizontal compared to vertical only fracking, it would be remarkable if the same relative ratios of ingredients were used, or even the same ingredients.*
- 2. Of special concern is the use of diesel fuel in drilling operations. The oil/gas companies maintain that the responsibility of complying with the regulations that prohibit the use of diesel lies with the well operators. Will DEC have the authority and the manpower needed to regulate the use of diesel and make sure that it is not used?*
- 3. Included among the injected chemicals are "trade secret" components that only DEC and DOH are privy to. The fact that citizens are not kept informed of chemicals that might contaminate the drinking water on which they and their families depend, is simply outrageous. We are not Communist China where the government decides what the general public may or may not know. All ingredients and their relative amounts must be made public.*

6.1.3.3 Flowback Water and Production Brine

"Table 5.11 lists parameters found in the flowback analyses that are not regulated in New York. Column 2 shows the number of samples that were analyzed for the particular parameter; column 3 indicates the number of samples in which the parameter was detected. Information presented in Tables 5.10 and 5.11 are based on limited data from Pennsylvania and West Virginia. Samples were not collected specifically for this type of analysis or under the Department 's oversight.

Characteristics of flowback from the Marcellus Shale in New York are expected to be similar to flowback from Pennsylvania and West Virginia, but not identical. The raw data for these tables came from several sources, with likely varying degrees of reliability, and the analytical methods used were not all the same for given parameters. Sometimes, laboratories need to use different analytical methods depending on the consistency and quality of the sample; sometimes the laboratories are only required to provide a certain level of accuracy. Therefore, the method detection limits may be different. The quality and composition of flowback from a single well can also change within a few days after the well is fractured. This data does not control for any of these variables."

It is clear that much work is in store for DEC in order to analyze and characterize the flowback water from each and every well.

The production brine and its associated radioactive components are more thoroughly analyzed in Chapter 5. Of particular significance is Appendix 13 that lists the various radioactive components associated with the brine. Here, we reproduce the results for Radium-226 that, as already mentioned, is of particular concern as an emitter of

alpha particles, extremely dangerous if inhaled or ingested, children being specially vulnerable (please turn to end page). In two cases, at least, the concentration of Radium-226 is close to one thousand times the safe limit., and others are significantly beyond the safe limit. This represents only a small fraction of wells that are planned for permitting.

How does DEC propose to safely store this dangerous radioactive waste?

6.1.4 Groundwater Impacts Associated With Well-Drilling and Construction

"The wellbore being drilled, completed or produced...has the potential to provide subsurface pathways for groundwater pollution from well-drilling, flowback or production operations. Pollutants could include:

- **Turbidity;**
- **Fluids pumped into or flowing from rock formations penetrated by the well, and**
- **Natural gas present in the rock formations penetrated by the well."**

Although these hazards already existed for vertical wells, they will be exacerbated for horizontal wells due to multiple wells being drilled from one well pad, the significantly larger volumes of water laced with chemicals needed during the fracking process, together with the huge explosive forces on the shale as water, under enormous pressures, is forced into the shale to further open up the fissures.

These "subsurface pathways for groundwater pollution" are reason for concern. Since the horizontal component of the drill pipe can extend for 4,000 feet or more from the bore-hole, a buffer (setback) of a minimum of another 2,000 to 4,000 feet from the end of the horizontal component should be mandated, depending on the depth of the shale layer below the surface. The shallower the layer, the more likelihood there will be of the explosive forces opening up pathways to an overlying aquifer, and the greater need for a wider buffer. These regulations should apply to all public drinking water sources including their underground pipes and tunnels; also to all private wells, primary and principal aquifers, NY State Forests, State Parks, and Wildlife Management Areas. Agricultural lands should also be strictly protected with a minimum of a one-mile setback. NYS agriculture provides vital food for NYS residents and is a sustainable contributor to the economy. It should not be placed at risk.

6.1.7 Waste Transport

"Although the Department's regulations do not classify drilling and production wastes as hazardous, like all waste they must be handled and disposed of in accordance with all regulatory requirements."

This is stating the obvious. Why would these wastes be subjected to any less stringent regulations than other wastes? Indeed, because of the high radioactive content compounded by high levels of salts and heavy metals in the brine, these wastes should and must be treated as hazardous and be disposed of accordingly. Classifying them as industrial rather than hazardous would expose the public to dangerous health hazards, and possibly lawsuits against the DEC that the Department cannot win.

6.1.8 Fluid Discharge

"Direct discharge of fluids onto the ground or into surface water bodies from the well pad are prohibited. Discharges would be managed at treatment facilities, appropriately recycled, or in permitted disposal wells."

Since discharges would contain toxic, radioactive and high salt-content materials laced with heavy metals, the Department should be specific regarding which facilities in NYS are capable of treating such materials; how it proposes to recycle them and where, if any, are there "disposal wells" in NYS. If NYS were unable to safely handle and dispose of such wastes, to where would they be transported; what would be the hazards encountered during transportation; and how much would it cost?

Following a lengthy analysis, DEC concludes: "Based on the above, there is questionable available capacity for POTWs in New York State to accept high-volume hydraulic fracturing wastewater."

The Department also intends to propose that "operators limit influent concentrations (as measured prior to admixture with POTW influent) of radium to 15pCi/L." How the operators will succeed in reducing the high levels of radium in brine water is not specified. However, the Department is only "proposing" this reduction, not "imposing" it.

6.1.8.2 Private Offsite Wastewater Treatment and/or Reuse Facilities

"Privately owned facilities built specifically for the reuse and/or treatment and disposal of industrial wastewater from high-volume hydraulic fracturing operate in other states, including Pennsylvania. Similar facilities that might be constructed in New York would require a SPDES permit if the operator of the facility intends to discharge treated effluent to surface or groundwater. The treatment methods that would be applicable to these facilities are discussed in Chapter 5. A number of adverse impacts are possible resulting from improper maintenance or overloading of these systems, resulting in either surface or water discharges that do not comply with applicable standards. However, properly maintained and regulated systems, along with waste tracking and SPDES permitting control measures as described in Chapter 7 would mitigate the potential for these impacts."

Given the lack of suitable POTWs in NYS, this section includes a discussion of how privately-owned facilities "built specifically for the reuse or treatment and disposal of industrial wastewater from high-volume hydraulic fracturing...." might be constructed in NYS.

We note that these potential facilities would be built to treat "industrial" rather than "hazardous" wastes. As previously stated, these wastes, with their high brine, heavy metal and radioactive contents, should be classified as "hazardous" rather than "industrial". The Department's duty is to protect the public and the environment, rather than the oil/gas companies' bottom line.

It is unrealistic to assume that the DEC has the manpower to regulate these privately-owned wastewater treatment plants in addition to those that are publicly-owned.

6.1.8.4 Disposal Wells

"[t]he potential for significant adverse environmental impacts from any proposal to inject flowback water from high volume hydraulic fracturing into a disposal well

would be reviewed on a site-specific basis with consideration to local geology (including faults and seismicity), hydrogeology, nearby wellbores or other potential conduits for fluid migration and other pertinent site-specific factors."

This leads to two questions.

(1) How and when will DEC acquire sufficient manpower to be able to truly analyze the suitability of any proposed disposal well, and

(2), if, as is suggested in some cases, that 80% of the fracking fluid be left permanently underground, shouldn't the applicant obtain a permit as for a disposal well?

6.2 Floodplains

"Accordingly, construction of drill pads within flood plains raises serious and significant environmental issues and risks."

Given the recent devastating flooding and collateral damage caused by Tropical Storm Irene, it should be abundantly clear that no drilling facility should be allowed within a 100-year storm flood plain.

6.4.1.2 Impacts of Forest Fragmentation

New York's Marcellus Shale is "...57% forested, 28% grassland/agricultural lands, and 3% scrub/shrub. The other 12% is divided evenly between developed land and open water/wetlands. As forests are the most common cover types, it is reasonable to assume that development of the Marcellus Shale would have a substantial impact on forest habitat and species...The forest complex provides key ecosystem services that provide substantial ecological, economic and social benefits (water quality protection, clean air, flood protection, pollination, pest predation, wildlife habitat and diversity, recreational opportunities etc.) that extend far beyond the boundaries of any individual forested area...Large, contiguous forest patches are more resistant to the spread of invasive species, suffer less tree damage from wind and ice storms, and provide more ecosystem services - from carbon storage to water filtration - than small patches."

Given this glowing description of the benefits of forests, it would seem abundantly clear that they should not, in any way, be impacted by fracking activities. However, although surface drilling is prohibited in both NY State Forests and NY Parklands, sub-surface horizontal drilling, so far, is allowed. No such drilling should be allowed below these forests that were created on "State Reforestation Areas, consisting of not less than 500 acres of contiguous land,...to be 'forever devoted to reforestation and the establishment and maintenance thereon of forests for watershed protection, the production of timber and for recreation and kindred purposes (Article 9, Title 5, Environmental Conservation Law)'".

In order to protect these forests from sub-surface drilling, the regulations should require a setback of a minimum of 5,000 feet from their edge

Further, no pipelines carrying oil or gas, and subject to state and federal regulations, should be allowed within these forests. In addition to possible leaks and spills, they would bring fragmentation, and destroy the very purpose of these forests.

Nothing could be more contrary to the purpose for which these forests were created than the heavily destructive, industrial impacts of high-volume, hydraulic fracturing.

6.5.2.1 Air Quality Impact Assessment

"Based on information in the Industry Information Report and an update to EPA's dispersion model, the initial PM10/PM2.5 modeling approach and conclusions have been updated."

We recommend that DEC seek air quality information in addition to the Industry Information Report, in order to gain a larger perspective on this important issue. In spite of a very lengthy dissertation on air quality issues, some related to fracking, nowhere did DEC present anything resembling a mathematical model whose solution could approximate real conditions, and be tested by measuring on-site parameters. If validated, the mathematical model would be a useful tool for making predictions at other sites whose parameters would be adjusted to local conditions.

APPENDIX

The Maximum Contaminant Level of Radium-226 in water is 15picocuries/liter (pCi/L)

<u>Well</u>	<u>Town</u>	<u>Parameter</u> (Radium-226 - pCi/L))
Calabro TI	Orange (Schuyler)	13,510 +/- 2,655
Maxwell IC	Caton (Steuben) (10/7/2008)	2,472 +/- 484
Carpenter I	Troupsberg (Steuben)	5,352 +/- 1,051
Zinck 1	Woodhull (Steuben)	4,049 +/- 807
Frost 2	Orange (Schuyler)	2,647 +/- 494

Webster TI	Orange (Schuyler)	16,030 +/- 2995
Maxwell IC	Caton (Steuben) (4/1/2009)	7,885 +/- 1,568
Schiavone 2	Reading (Schuyler)	15,140 +/- 2,989
Parker 1	Oxford (Chenango)	1,779 +/- 343
WGI 10	Dix (Schuyler)	6,125 +/- 1,225
WGI 11	Dix (Schuyler)	10,160 +/- 2,026

COMMENTS ON CHAPTER 7

This chapter includes past mitigation measures adopted in the 1992 GEIS together with new mitigation measures "to target potential impacts associated with horizontal drilling, multi-well pad development and high-volume hydraulic fracturing."

Page 7-73 **7.1.12.1 Setbacks from Ground Water Resources**

"The EAF addendum for high-volume fracturing would require evidence of diligent efforts by the well-operator to determine the existence of public or private wells and domestic-supply springs within a half-mile (2,640 feet) of any proposed drilling location."

This is a meaningless requirement since no specific information regarding these springs and wells would be required - simply a show of "diligent efforts. Furthermore a "drilling location" is not specified. Does it mean 2,640 feet from the edge or the center of the pad? All wells within the horizontal arms of the fracking unit, measured from the edge of the unit, to which is added another 2,000 to 4,000 feet depending on the depth to the shale layer, should be tested pre-fracking, followed by post-fracking testing at intervals to be determined. The tests should include all ingredients used in the fracking process including those that are classified as "trade secrets, in addition to pre-testing for methane". This elementary requirement has been omitted, so far. It would establish, without any doubt, whether wells, for example, are being contaminated by the fracking process or whether the contamination is coming from some other source.

Page 7-75 **Public Water Supplies and Primary and Principal Aquifers**

The Department proposes a 2,000-foot setback from the closest edge of the well-pad from any public water supply well, reservoirs, natural lake or man-made impoundments, or river or stream intakes. A re-evaluation will take place after a trial period of three years.

The 2,000-foot setback appears to be an arbitrary figure with no scientific justification being offered. Further, a three-year reevaluation might not be a sufficiently long period of time for contamination to become apparent. The Department should continue the monitoring for, at least, ten years, since some wells might become contaminated, and others not. A simpler regulation that is justifiable is to require a minimum of a 2,000 to 4,000-foot setback from the end of the horizontal arm of the well, this length depending on the depth to the shale layer. The shallower the shale layer, the more likely it is that aquifers and wells could be contaminated by drilling; therefore the setback should extend further than for deeper layers. These same setbacks should apply to both primary and principal aquifers. The Department's proposal of a 500-foot setback is unjustifiably and arbitrarily small.

The Department's "justification" for a 500-foot setback from a private well is inadequate, and omits the impacts and pollution caused by heavy truck traffic; the storm water runoff from the impervious well-pad; the possible sub-surface disruptions caused by thumper trucks and ground-shaking heavy equipment. Compare 500 feet to only two NYC blocks to appreciate the closeness. Even a passive septic tank is required to be 100 feet from the well that supplies drinking water. A fracking operation has an immeasurably greater impact than a well-maintained septic tank.

This small separation of a private well to the drill pad would clearly allow for the intense density of fracking units within the approximately 10 million acres of Marcellus Shale within NYS. This area will become pockmarked with drill pads, roads and pipelines, unrecognizable from today's forested and agricultural landscape.

Page 7-80 7.4.1.1 BMPs for Reducing Direct Impacts at Individual Well Sites

DEC's proposed list for reducing impacts is to be commended. However, it is unrealistic if the manpower is unavailable to carry them out and, moreover, there are no regulations in place. No permits should be issued prior to the regulations being adopted.

The Department pays exemplary attention to grassland focus areas, habitat fragmentation, minimum threshold areas for forests (150 acres), Without regulations, however, there is no hope of these worthwhile suggestions being acted upon. On the contrary, it appears that permits will be issued soon after the SEQR review has been completed, prior to regulations having been adopted. We doubt that regulations adopted after a permit has been issued, can be applied retroactively.

Regarding NY State Forests, Wildlife Management Areas and State Parks where surface drilling is now forbidden, no drilling within 2,000 to 4,000 feet from the end of any horizontal component of the well should be allowed, depending on the depth of the shale layer below the surface. Even underground drilling could harm these valuable lands that are protected by the NYS Constitution, the ECL, and the Environmental Quality Bond Act of 1972 and 1986.

COMMENTS ON CHAPTER 8

Page 8-2 8.1.1.1 SEQRA Participation

"...The process will continue to include all opportunities for public input normally provided under SEQRA:

- Issuance of a permit to drill in State Parklands;"

We question why a permit to drill in State Parklands is required since surface drilling would be prohibited in 'state-owned lands including parks, forest areas and wildlife management areas.'

- "Issuance of a permit to drill when high-volume hydraulic fracturing is proposed at a well pad within the boundary of a principal aquifer or outside but within 500 feet of the boundary of a principal aquifer."

No permits to drill should be given to drill within the boundary of a principal aquifer or within 500 feet of its boundary - at any time.

- "Issuance of a permit to drill when high-volume fracturing is proposed on a well pad within 150 feet of a perennial or intermittent stream that is not a tributary to a public drinking water supply, storm drain, lake or pond."

Add wetland, headwater stream and higher order streams.

Page 8-3 **8.1.1.5 Local Planning Documents**

"The Department's exclusive authority to issue well permits supersedes local government authority relative to well siting. However, in order to consider potential significant adverse impacts on land use and zoning as required by SEQRA, the EAF Addendum will require the applicant to identify whether the proposed location of the well pad, or any other activity under the jurisdiction of the Department, conflicts with local land use laws or regulations, plans or policies. The applicant will also be required to identify whether the well pad is located in an area where the affected community has adopted a comprehensive plan or other local land use plan and whether the proposed action is inconsistent with such plan(s). For actions where the applicant indicates to the Department that the location of the well pad, or any other activity under the jurisdiction of the Department, is either consistent with local land use laws, regulations, plans or policies, or is not covered by such local land use laws, regulations, plans or policies, the Department will proceed to permit issuance unless it receives notice of an asserted conflict by the potentially impacted local government."

Although the Department has the exclusive authority to issue well permits, that does not give it the authority to issue such permits regardless of the well-being of the community that deems itself adversely affected by the consequences of such a permit. These situations will, no doubt, entail legal battles.

Page 8-4 **8.1.2.1 Public Service Commission**

Article VII, "Siting of Major Utility Transmission Facilities," is the section of the New York Public Service Law (PSL) that requires a full environmental impact review of the siting, design, construction, and operation of major intrastate electric and natural gas transmission facilities in New York State. The Public Service Commission (Commission or PSC) has approval authority over actions involving intrastate electric power transmission lines and high-pressure natural fuel Preliminary Revised Draft SGEIS 2011, gas pipelines, and actions related to such projects.

Sections 8.1.2.1 and 8.1.2.2 contain lengthy descriptions of the various components of a gas pipeline application that have to be submitted to and approved by the PSC (among others). It appears that nowhere is off-limits and that gas pipelines could be approved through areas where drilling is prohibited such as NY State Forests, Parklands, Wildlife

Management Areas and the NYC Watershed. This is unacceptable for the same reasons that drilling in those areas is unacceptable. Allowing major pipelines to run through those areas must be prohibited.

Page 8-17 8.1.2.3 NYS Department of Transportation

The DEIS takes note of the transport of hazardous materials and, reassuringly, lists the extra precautions that are needed. However, so far, the Department has classified fracking fluids as industrial rather than hazardous wastes, so its list of extra precautions, although impressive, is meaningless.

Page 8-20 8.1.3.2 Occupational Safety and Health Administration

"In order to insure chemical safety in the workplace, information must be available about the identities and hazards of chemicals. OSHA's Hazard Communication Standard, 29 CFR§ 1910.1200, requires the development and dissemination of such information and requires that chemical manufacturers and importers evaluate the hazards of the chemicals they produce or import....prepare labels and Material Safety Data Sheets (MSDSs) to convey the hazard information, and train workers to handle chemicals appropriately... 29 CFR§ 1910.1200(i) sets forth an exception from disclosure in the MSDSs of the specific chemical identity, including the chemical name and other specific identification of a hazardous chemical, if such information is considered to be trade secret.... the specific chemical identity is made available to health professionals, employees and designated representatives..."

It is simply outrageous that the health and safety of the workers, ignorant of the dangers of some of the materials they are handling, should be put in jeopardy to safeguard a company's bottom line. As already mentioned, the public at large also has the right to know which chemicals might be affecting their drinking water and jeopardizing their health and the health of their families. DEC should withhold permitting of wells until all such chemicals are revealed.