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Attn: dSGEIS Comments
New York State Department of Environmental Conservation
625 Broadway
Albany, NY 12233-6510

**Re: Comments on the Revised High Volume Hydraulic Fracturing (HVHF)
Proposed Regulations 6 NYCRR Parts 52, 190, 550-556, 560, and 75 and the
Supporting Documentation Required by the State Administrative Procedures Act
(SAPA)**

The Seneca Lake Pure Waters Association is sending this letter of concerns with the revised proposed regulations which were issued on November 29, 2012¹. It is clear that these revised proposed regulations are incomplete, sketchy and poorly documented. Apparently the reason the New York State Department of Environmental Conservation (DEC) rushed to file these incomplete regulations was to effect and file a Notice of Continuation under the State Administrative Procedure Act (SAPA) that extends the rulemaking process for ninety days. The DEC appears to be “playing games” with the public in a disingenuous and non-transparent manner which further erodes public confidence in the department’s interest and indeed capabilities to manage a complex process such as high volume hydraulic fracturing (HVHF) within New York State to protect the health and environment of its residents. If HVHF is permitted in New York State, its effective management for the protection of the environment will require a working partnership of DEC, industry, local municipalities and NYS residents. The convoluted DEC process for developing regulations and a Supplemental Generic Environmental Impact Statement (SGEIS) by which HVHF is to be managed within the state has done little to establish either leadership or such a partnership.

¹ <http://www.dec.ny.gov/regulations/77353.html>

"Let the science dictate the conclusion," Cuomo told reporters in August, adding, "We will make a decision based on the facts."² The most effective step which can be taken by the Governor in fulfilling his goal is to restart the entire process, base it on facts and develop the regulations derived from a completed and approved SGEIS. Facts are being developed through the experience of other states with HVHF³.

Facts are being developed in academic studies throughout the country⁴, and internationally^{5,6,7}. Facts are being developed by the EPA which is scheduled to issue its research report on the impact of HVHF on drinking water in 2014⁸. Why not bring this world of experience to bear on the dSGEIS and proposed regulations for New York State? The gas has been in these shale deposits for 390 million years. A few additional years at this point to get the task of extracting this gas in such a way so as not to damage the environment and the health of the residents of New York State is insignificant. Using the words of Governor Cuomo, "let science dictate the conclusion".

Unfortunately, the documents generated thus far by the DEC in either the drafts of the SGEIS or in the two sets of proposed regulations, do not provide references to key facts and conclusions that will withstand public and scientific scrutiny. In fact, there is a paucity of references throughout all of these documents, and therefore a failure to meet the minimum requirements of the State Administrative Procedures Act, (SAPA) which asks that such evidence be provided in all regulatory documents.

Our association's review of the DEC documents has concluded that these documents do not meet the threshold requirements of the SAPA legislation and likely will be challenged in the courts whatever decision is made by the Governor. It is incumbent on the Governor to back away from this impending "train wreck" before it happens and put his decision-making on a sound scientific factual footing. The present path is not on that track.

State Administrative Procedures Act, (SAPA)

Section 201 of the State Administrative Procedures Act, (SAPA) "Adoption of Procedures" requires that an "agency shall strive to ensure that, to the maximum extent practical, its rules, regulations and related documents are written in a clear and coherent manner, using words with common and everyday meanings."

² http://www.cnn.com/id/100261451/Cuomo_administration_delays_lifting_NY_ban_on_controversial_drilling

³ <http://online.wsj.com/article/SB10001424052702303410404577468921667124942.html>

⁴ <http://www.nicholas.duke.edu/news/fracking-on-pnas-website>

⁵ http://switchboard.nrdc.org/blogs/amall/the_latest_science_from_overse.html

⁶ http://dialog-erdgasundfrac.de/sites/dialog-erdgasundfrac.de/files/Ex_HydrofrackingRiskAssessment_120611.pdf

⁷ Hydrofracking Risk Assessment, Executive Summary, "Study concerning the safety and environmental compatibility of hydrofracking for natural gas production from unconventional reservoirs", Panel of experts: C. Ewen, D. Borchardt, S. Richter, R. Hammerbacher

⁸ <http://www.epa.gov/hfstudy/>

A 1991 amendment to SAPA § 202 (a) requires DEC and other agencies to identify in the RIS (Regulatory Impact Statement) studies that served as the basis for the rule, and to explain the agency's use of such studies:

“Where one or more scientific or statistical studies, reports or analyses has served as the basis for the rule, the statement shall contain a citation to each such study, report or analysis and shall indicate how it was used to determine the necessity for or the benefits to be derived from the rule.”

Further, SAPA § 202-a. Regulatory impact, NY STATE ADM PRO § 202 (a) states:

“3. (b) ...A statement setting forth the purpose of, necessity for, and benefits derived from the rule, a citation for and summary, not to exceed five hundred words, of each scientific or statistical study, report or analysis that served as the basis for the rule, an explanation of how it was used to determine the necessity for and benefits derived from the rule, and the name of the person that produced each study, report or analysis;

6. Each agency shall issue a revised regulatory impact statement when:

(i) the information presented in the statement is inadequate or incomplete, provided, however, such revised statement shall be submitted as soon as practicable to the secretary of state for publication in the state register, provided, further, if such statement exceeds two thousand words, the notice shall include only a summary of such statement in less than two thousand words;

(ii) a proposed rule contains any substantial revisions and such revisions necessitate that such statement be modified. A revised statement shall describe the reasons for such changes and shall include any modifications in the regulatory impact statement that are necessary as a result of such changes; or

(iii) there are no substantial revisions in the proposed rule but there are changes in the text of the rule as adopted when compared with the text of the latest published version of the proposed rule and such changes would necessitate that such statement be modified. A revised statement shall describe the reasons for such changes and shall include any modifications in the regulatory impact statement that are necessary as a result of such changes.”

The DEC documents do not meet this test. As detailed below, the proposed regulations and supporting documents fail to comply with these legal requirements. A few examples of the problem presented by the regulation document will serve to illustrate this particular point, but they are by no means the only examples:

Example 1:

560.4 Setbacks

(a) No well pad or portion of a well pad may be located:

(2) within 500 feet from an inhabited dwelling or place of assembly;

What is the scientific data on which this regulation is based? DEC has provided no reference for this regulation, yet it is required to provide the reference used to make this critical judgment. Is this setback sufficient to protect the health and safety of residents

living near gas wells? We believe that the “facts” for this statement are still being developed in the studies cited earlier in this letter.

What is the term of reference for “place of assembly”? It is not defined in the document anywhere that we could find. Is that a street corner, a beach, a building, a playground ...?

Example 2

Section 560.7(a) Waste Management and Reclamation

Fluids must be removed from any on-site pit and the pit reclaimed no later than 45 days after completion of drilling and stimulation operations at the last well on the pad, unless the department grants an extension pursuant to paragraph 554.1(c)(3) of this Title. Flowback water must be removed from on-site tanks within the same time frame.

What studies demonstrate that 45-days will prevent human exposures to evaporating solvents and other hazardous air pollutants? Where are the references? One could argue that 24 hours is too long an exposure.

Example 3

Section 556.2(b) Operating Practices

No gas from any gas well, except such as is produced in a clean-up period not to exceed 48 hours after any completion or stimulation operation or workover, plus that used for the controlled testing of the well's potential in a period not to exceed 24 hours, plus that used in any operational requirements, shall be permitted to escape into the air. [Extensions of these time periods shall be granted administratively by the department upon application therefor by the owner or operator and the demonstration of sufficient good cause.]

Based on the DEC-recommended maximum time, what toxic materials and in what quantities are likely to be released to the atmosphere from these pits? No facts are given or referenced. How will these emissions impact climate stability and air pollution in the vicinity of the well?

Example 4

Section 750-3.3(a) Prohibited Activities and Discharges

Well pads for HVHF operations are prohibited, and no SPDES permit will be issued authorizing any such activity or discharge:

- (1) within 4,000 feet of, and including, an unfiltered surface drinking water supply watersheds;
- (2) within 500 feet of, and including, a primary aquifer;
- (3) within 100-year floodplains;
- (4) within 2,000 feet of any public (municipal or otherwise) drinking water supply well, reservoir, natural lake, man-made impoundment, or spring; and

(5) within 2,000 feet around a public (municipal or otherwise) drinking water supply intake in flowing water with an additional prohibition of 1,000 feet on each side of the main flowing waterbody and any upstream tributary to that waterbody for a distance of one mile from the public drinking water supply intake; and

(6) within 500 feet of a private water well or domestic use spring, or water supply for crops or livestock, unless the Department has granted a variance from the setback pursuant to subparagraph 560.4(c) of this Title, adopted on XX, 20XX.

What is the factual, referenced scientific basis for each of these critical setback requirements? Are these in fact based on good science, or are they arbitrary numbers generated by DEC. This is a critical issue and must be referenced to give the public the basis on which DEC came up with these rules.

These examples serve to point out the failure of the present proposed regulations in meeting the minimum requirements of the SAPA legislation and is the reason why our association believes that these regulations will not hold up to legal scrutiny no matter what decision is made by the Governor.

Further, the supporting documents do not adequately consider alternatives and fail to assess the costs to state and local governments and therefore must be revised and republished for additional public comment. SAPA (202-a. Regulatory impact) requires that “in developing a rule, an agency shall, to the extent consistent with the objectives of applicable statutes, consider utilizing approaches which are designed to avoid undue deleterious economic effects or overly burdensome impacts of the rule upon persons, including persons residing in New York state's rural areas, directly or indirectly affected by it or upon the economy or administration of state or local governmental agencies.”

Concerns with Propose Regulations

"Let the science dictate the conclusion. We will make a decision based on the facts."⁹

Section 750 - 3.12 Flowback and Production Water Disposal

The practice of spreading flowback and production waters from HVHF under the auspices of the Beneficial Use Determination (BUD), was commented on by our association as well as many others in response to the first draft of the proposed regulations in January, 2012 and our recommendation was to stop the practice.

In 1999 the DEC completed an internal investigation entitled “An Investigation of Naturally Occurring Radioactive Materials (NORM) in Oil and Gas Wells” assisted by representatives from sixteen oil and gas operations. The report¹⁰ concluded that drill

⁹ http://www.cnn.com/id/100261451/Cuomo_administration_delays_lifting_NY_ban_on_controversial_drilling

¹⁰ *An Investigation Of Naturally Occurring Radioactive Materials (Norm) In Oil And Gas Wells In New York State*, Division of Solid & Hazardous Materials Bureau of Radiation and Hazardous Site Management 50 Wolf Road, Room 402 Albany, New York 12233-7255, April 1999.

cuttings and wastewater from oil and gas drilling operations “do not constitute a health risk for the State’s residents nor present a potential degradation of the State’s environment.” Of course this study has little to inform the situation with respect to HVHF since these samples were all taken from vertical wells in New York at much shallower depths than the Marcellus and Utica Shales. Extrapolation from the data on vertical wells to HVHF in the shale deposits is not valid.

Our association is concerned with the DEC’s low concern with the NORM issue which is apparently based on their earlier study which is irrelevant to HVHF.

Without reference to scientific data, the DEC rejected concerns raised by a number of responders to the draft proposed regulations in 2011. They use Response 3898 which does not address the issue from a scientific data standpoint and refer to some bureaucratic division of responsibility and thereby dismissed the issue.

Response 3898:

The revised regulations at 750-3 prohibit the discharge of flowback to the ground, but allow the discharge of drilling fluids, formation fluids and production brine in accordance with the terms and conditions of a BUD. The analysis for the BUD considers the geographic area and/or specific roads on which the production brine can be spread and would take into account impacts to water supply bodies or aquifers in the area. If approved, the BUD would restrict the quantity of brine spread to minimize runoff of excess brine and potential impact to ground and surface waters. Within the Department, the Division of Materials Management is responsible for the issuance of BUDs.

The scientific facts are that the National Council on Radiation Protection (NCRP), an organization chartered by the U.S. Congress in 1964 as the National Council on Radiation Protection and Measurements have commented on the proposed regulations of the DEC.

The charter of this organization is to:

1. collect, analyze, develop and disseminate in the public interest information and recommendations about (a) protection against radiation (referred to herein as radiation protection) and (b) radiation measurements, quantities and units, particularly those concerned with radiation protection;
2. provide a means by which organizations concerned with the scientific and related aspects of radiation protection and of radiation quantities, units and measurements may cooperate for effective utilization of their combined resources, and to stimulate the work of such organizations;
3. develop basic concepts about radiation quantities, units and measurements, about the application of these concepts, and about radiation protection;
4. cooperate with the International Commission on Radiological Protection, the Federal Radiation Council, the International Commission on Radiation Units and Measurements, and other national and international organizations, governmental and private, concerned with radiation quantities, units and measurements and with radiation protection."

An excerpt from their report¹¹ of October, 2012 commenting on the DEC draft documents and specifically on the BUD practice of using the flowback and production brines on roads to control ice from their staff scientist was as follows:

“Importantly, the type of radioactive material found in the Marcellus Shale and brought to the surface by horizontal hydrofracking is the type that is particularly long-lived and could easily bio-accumulate over time and deliver a dangerous radiation dose to potentially millions of people long after the drilling is over.”

In commenting about the BUD practice of spreading flowback and production wastewater on roads, the U.S. Fish and Wildlife Service noted in their response to the proposed regulations one year ago:

Comment 5878:

“The Department proposes to allow production brine to be disposed of in injection wells, in accordance with a Beneficial Use Determination or by other means proposed by the permittee. A Beneficial Use Determination is not described in Section 750-3.12 (6) nor are examples provided. However, a common use in Pennsylvania is to spread the production brine on roads in winter to melt ice and snow (Pennsylvania Department of Environmental Protection 2011b). United States Fish and Wildlife are concerned that this use has not been properly studied to determine the short or long term effects of production brine on fish and wildlife or their habitats. To our knowledge, no adequate studies have been conducted on the toxicity of production brine in New York. Further, no studies have been conducted on the cumulative effects of brine on water quality. United States Fish and Wildlife recommends that a Beneficial Use Determination not be issued for any production brine until an adequate study has been completed on the effects to fish and wildlife.”

Commenting on the DEC’s general treatment of concerns about the radioactivity brought to the surface in drilling wastes, NCRP states further in its report¹¹ as follows:

“A similarly cavalier attitude towards human exposure to radioactive material pervades the NYS DEC’s 2011 Draft Revised Supplemental Generic Environmental Impact Statement (rSGEIS). The document’s superficial characterization of radiation risks has prompted warnings from radiation experts, including those at the EPA whose public comments on the rSCEIS reflect deep concerns about the DEC’s understanding and appreciation of the actual risks posed by radiation.”

Our association concludes that the scientific facts on this issue have not been established on either side of the issue. The best scientific opinions, however, are in serious disagreement with the DEC’s position. The DEC does not appear to be concerned about getting more facts. In the interest of protecting our ground waters and lakes we believe the DEC should err on the side of caution and safety and carry out or commission studies which will more conclusively indicate the level of risk associated with the BUD practice of using waste water on roads. We believe DEC’s responses on

¹¹ *Consideration of Radiation in Hazardous Waste Produced from Horizontal Hydrofracking*, Report of E. Ivan White, Staff Scientist for the National Council on Radiation Protection, October, 2012

this issue and the revised proposed regulations issued on November 29 are inadequate in addressing this potentially serious problem.

Section 560.4 - Setbacks – Protecting Our Precious Water Sources

The DEC has differentiated drinking water sources as "Primary Aquifers" and "Principal Aquifers". While this distinction may be administratively useful for their purposes, it is not meaningful to the consuming public. The DEC document which defines these terms¹² points out that the essential difference between these two categories is the number of people served by the two types of sources. They are both vital sources of our drinking water for the future as our residential and business communities expand.

“The Principal Aquifers are, in effect, the potential Primary Water Supply Aquifers of the future.”¹³

As such, protections for both primary aquifers and principal aquifers across the state should be identical. It is apparent from these draft regulations that they are not. In some places, the setbacks are defined only for primary aquifers and not principal aquifers. (We challenged the lack of a scientific basis for the setback numbers earlier.) Now we are challenging the non-equivalent treatment of drinking water sources for people in New York State, Syracuse, and Rochester vs. those in Ithaca, Geneva, Corning and Dundee. The drinking water protections should be identical for residents in all of the regions of the state.

However, whereas primary aquifers are reasonably well identified and characterized, it is apparent that principal aquifers are not. The U.S. Geological survey notes that many of the principal aquifers are not sufficiently characterized and defined but with some effort could be¹³. In order for drilling to be allowed in these rural areas, it is clear that the DEC has work to do to properly characterize these principal aquifers and thereby to protect the drinking water supplies for residents in these areas by establishing appropriate setback requirements based on scientific facts.

Section 560.4 (c) The DEC nor the owner of a water well should not have the right to waive location of a drilling well closer than the setbacks specified for wells. Aquifer contamination is more likely the closer the drilling operation is to an existing water well. The water in a well is part of an aquifer and as such that aquifer is a “de facto” public source of water, since neighboring properties may be taking water from that same aquifer. As part of a public drinking water system protection must be provided for the entire system. No single owner of a well that takes water from an aquifer should have

¹² DEC Memorandum, October 20, 1990, *Primary and Principal Aquifer Determinations*, A. Pagano

¹³ Letter from W.O. Freeman, USGS to B.J. Field, DEC, *Comments on the revised draft SGEIS on the Oil, Gas and Solution Mining Regulatory Program Well Permit Issuance for Horizontal Drilling and High-Volume Hydraulic Fracturing to Develop the Marcellus Shale and Other Low-Permeability Gas Reservoirs*, January 5, 2012.

the right to increase the risk of contaminating that aquifer by allowing drilling closer than the setback for all wells in that system.

Facts that can be brought to bear on this issue are those from states where HVHF is practiced in which numerous cases of well contamination have been reported to the DEP many of which did not result in appropriate follow-up and remediation. In frustration, many of the victims of these experiences recorded their plights on YouTube as anecdotal information for the world to see and hear. This is what is happening in states where aquifers get contaminated and individual drinking water supplies are unusable as a result of drilling in the area. We do not need to repeat these disastrous scenarios in New York State, if we base the protections for all drinking water supplies including, both primary and principal aquifers, on a sound scientific basis.

Section 560.7 - Waste Management and Reclamation

This section of the regulations reads as though it is incomplete.

Paragraph (a) refers to the removal of fluids from pits within 45 days of completion of the last well on the pad. Presumably the only fluid in a pit is the unused water reserve for fracking the well. Is that correct? Why not say so in so many words? All other potentially hazardous liquids such as flowback and production waste water are contained in closed tanks. At least that is our understanding of these confusing regulations. Is that correct?

Throughout this section, the phrase “disposed of properly” is used repeatedly, but is not defined. The handling of wastes is one of the major ill-defined parts of the entire HVHF process and therefore it is the one that draws the largest concern from the public. If the HVHF process were properly researched, the waste problem would be included as part of the whole. Presently this part of the process is defined by the phrase “disposed of properly” which the DEC has not chosen to define.

Sending waste off to landfills shifts the burden to another venue. It does not solve the problem.

Sending waste water off to injection wells in another state also shifts the burden to yet another arena where the science has not yet caught up with the actions. In a recent report in the journal *Science*¹⁴ the question of whether the disposition of wastewater into injection wells stimulates earthquakes has been given further credence.

“Making a Bigger Big One.

The burgeoning subsurface injection of wastewater—mostly derived from “fracking” for oil and gas—has been setting off sizable earthquakes from New Mexico to Arkansas to Ohio (*Science*, 23 March, p. 1436). But the biggest suspected induced quake—the magnitude-5.7 Prague quake

¹⁴ *Science* Vol. 338 p1523, 21 December 2012

that struck central Oklahoma in November 2011— came long after the start of nearby injection. That cast doubt on any link to deep disposal. The 5.7 Prague was the second of three related quakes, however, and at the meeting, seismologist Katie Keranen of the University of Oklahoma, Norman, and colleagues reported that the first fault segment to rupture was less than 200 meters from two active injection wells and broke to the depth of the injection. They think known geological barriers delayed the quake by temporarily holding back the injected wastewater. The large size of the Prague quake relative to the small volume of injected wastewater suggests deep disposal can set off large quakes that might not have occurred naturally for centuries.”

Paragraph (i) of this section is incomplete. It calls for radiological analysis on the flowback and production waters as well as on the soils surrounding the drilling site, but the regulation ends there. What are the actions as a result of all these analyses? Who uses this data? Or is it all for “show”, just to say the analyses were done? Are these supposed to be regulations, or a description of activities? This is another example of the incompleteness of this document.

Who is qualified to do this testing and why is it not mandated that it be done by an independent laboratory? The testing protocol should be under the supervision of the NYSDOH.

Paragraph (k) is similarly incomplete. What is done with the radiation measurements? The vagueness of indicating ...”using instrumentation and on a schedule prescribed by the department” is not reassuring as a regulation.

Paragraph (l) is also vague and incomplete. It would be useful if the regulation contained an example of “plans approved by the department”. Given the understaffed nature of DEC and the department’s apparent inclination to favor input from the industry it is supposed to be regulating, this is not a statement that is reassuring to the public.

Our association’s concern with this regulation is that it does not “close the loop” on a major part of the process of HVHF in spelling out acceptable regulations for the “proper disposal” of wastes from the process. This part of the process should not be left to the “creativity” of the drillers and their subcontractors or New York will suffer the some of the same problems as have been experienced in Pennsylvania¹⁵ and other states.

Use of State Lands and Other “Off Limits” Areas for HVHF

The proposed regulation is unacceptable because while it prohibits drilling on state land it goes on to allow the extraction of gas from under state lands by permitting wells adjacent to state land to tunnel under the state lands for extraction of gas, including lakes and water reservoirs that are part of the state lands. The state lands which are set aside as nature preserves for the recreational use of our state residents and visitors should not be exploited for their mineral rights with the attendant environmental risks.

¹⁵ *Probation Given for Dumping Shale-Drilling Waste*, Wall Street Journal, June 15, 2012.

These proposed regulations now allow State Lands and other areas that are “off limits” to “surface disturbance” to be “ringed” with well pads, generators, compressors, etc. in short, heavy industrial activity, “sucking” the gas out from under these properties. We can imagine the Empire State of the future having “industrial zones” of this nature surrounding our recreation areas, schools and even those towns and municipalities who have successfully banned such activities from their town or village. The DEC is setting up a ludicrous situation which does not sound inviting to the tourism and wine industries in this state which have been thriving during the moratorium on HVHF and the low consumer prices for natural gas.

Since we have a number of areas within our large watershed that would likely be excluded from HVHF, we respectfully request that such areas, be they National or State Forests, municipalities aquifers, lakes we excluded from having the mineral rights under their surface areas exploited for natural gas extraction. It ridiculous to have these protected areas ringed with the heavy industrial activities when the surface areas have been exempted from this activity.

§ 560.5 Testing, Recordkeeping and Reporting Requirements.

(d) Water well testing: This section on well testing does not reach the threshold to be useful as a regulation. It states that the operator is expected to make “all reasonable attempts” to test wells? What does that mean? What are the limits of “reasonableness” in such a regulation? Next is the question of how many wells within either 1000’ or 2000’ should be tested ... all wells or just one? What if a private well owner gives permission to drill right next to a water well, does that well have to be tested? What if the well owner refuses to have the well tested? This section is still vaguely and poorly defined.

All wells within defined radius of the proposed well must be tested if the data is to be used to prove whether well contamination has or has not occurred as a result of HVHF. There should be no other option. All wells within the specified distances should be tested, not arbitrarily selected wells.

The collection of samples and the testing of wells should not be under the control of the operators but rather carried out by an independent, certified third party, such as a laboratory certified by the New York State Department of Health (NYSDOH) program. As the proposed regulation is written, this is likely to lead to questionable results that would not stand up in court.

The NYSDOH oversees drinking water in the state to insure its quality. NYSDOH should oversee the selection and testing of drinking water sources as part of this process and spell out the protocol for the tests to be conducted in certified laboratories. Since there is a requirement to disclose all the chemicals used in the HVHF process,

the tests to be carried out on the water wells selected by the NYSDOH should be tailored to the chemicals expected to be used in the development of the specific gas well. After completion of the gas well development, the NYSDOH should oversee the periodic testing of these same water wells to determine whether there has been water well contamination with time. This will provide scientifically-acceptable data which will hold up legally should well water contamination occur and will provide the data for establishing responsibility for any remediation. Such data should be available to the public for analysis and cumulative assessment of the risks to drinking water associated with HVHF.

Significant deviations in the analyses as judged by the DOH (who should be overseeing the testing) should be reported to the DEC immediately for action. The five days suggested in this regulation could leave a household, farm animals or community consuming polluted, toxic water during the administrative delay period.

One of the reasons there has been difficulty in establishing facts about the water contamination from HVHF, is that the sampling and testing of water sources have not been carried out according to certified procedures. Furthermore, most often the testing is done or arranged by the operators and when there is a dispute settlement between the operators and the private parties over water contamination, the court records are often sealed, the parties to the settlement are placed under “gag order” and the testing information is lost in so far as any public understanding of the incident. We should not allow this to happen in New York State.

It would also be good science to REQUIRE that all well testing results be reported to the NYSDOH, as they are completed, not simply made available to the well owner and to DEC or County Health Department, upon request. NYSDOH has a great deal of experience and expertise in the management of registries and should, with proper financial support, be able to set up a registry to monitor drinking water supplies.

Presumably the actual tests of the water samples are covered under Section 7.50-3.13 (i) requiring a certified laboratory to carry out the analyses. Nevertheless, as outlined above, the NYSDOH should have responsibility and oversight for the testing strategy; including, on-going monitoring, and it should be spelled out in detail in these regulations.

Section 552.2 is revised and a new subdivision (f) is proposed to read:

(f) Under unusual or emergency circumstances, or for other good cause shown, the department may permit the commencement of operations by verbal authority of the director or director's deputy prior to the issuance of a formal permit if a complete application is on file with the department.

The above provision of Section 552.2 seems to give the NYSDEC the ability to allow all HVHF operations to commence without all of the safeguards involved in the permitting process to have been approved. This appears to by-pass the detailed procedures. No rationale is evident for the inclusion of this proposed regulation. These changes should be removed unless the rationale for this is provided and publically reviewed as to the reason for its inclusion.

Regulatory Impact Statement (RIS) and other supporting documents

As stated earlier, **SAPA, in Section 202-a. Regulatory Impact Statement**, requires that,

“in developing a rule, an agency shall, to the extent consistent with the objectives of applicable statutes, consider utilizing approaches which are designed to avoid undue deleterious economic effects or overly burdensome impacts of the rule upon persons, including persons residing in New York state’s rural areas, directly or indirectly affected by it or upon the economy or administration of state or local governmental agencies.”

Independent economic experts have reviewed the experience of HVHF in other regions of the country as well as these and earlier proposed regulations and concluded that they grossly understate the cost impact on local municipalities and the state and overstate the economic benefits^{16,17,18,19,20,21,22,23}.

¹⁶ Jannette M. Barth, PhD., Economist, Pepacton Institute LLC, *Comments on NYS DEC’s Draft HVHF Regulations*, Submitted to DEC, December 28, 2012.

¹⁷ W.R. Freudenburg and L.J. Wilson, “Mining the Data: Analyzing the Economic Implications of Mining for Nonmetropolitan Regions,” *Sociological Inquiry* 72 (4) (2002): 549:575.

¹⁸ Headwaters Economics, “Fossil Fuel Extraction as a County Economic Development Strategy: Are Energy---focusing Counties Benefiting?” *Energy and the West Series*, Bozeman, MT (September 2008, revised 7/11/09).

¹⁹ T. Kinnaman, “The Economic Impact of Shale Gas Extraction: A Review of Existing Studies,” *Ecological Economics* 70 (2011):1243-1249.

²⁰ L. Muehlenbachs, E. Spiller and C. Timmins, “Shale Gas Development and Property Values: Differences Across Drinking Water Sources,” Discussion Paper, Resources for the Future, July 2012.

²¹ T.W. Kelsey and M. W. Ward, “Natural Gas Drilling Effects on Municipal Governments Throughout Pennsylvania’s Marcellus Shale Region, 2010,” Penn State Cooperative Extension.

²² T. Dutzik, E. Ridlington, J. Rumlper, “The Costs of Fracking: The Price Tag of Dirty Drilling’s Environmental Damage,” Penn Environment Research & Policy Center, Fall 2012.

²³ J.G. Weber, “The Effects of a Natural Gas Boom on Employment and Income in Colorado, Texas and Wyoming,” *Energy Economics* 34(2012) 1580---1588.

How can the public be expected to comment on the following statement in the RIS, when an approved SGEIS has not yet been released?

General:

In keeping with Revised Draft Supplemental Generic Environmental Impact Statement on the Oil, Gas and Solution Mining Regulatory Program (Well Permit Issuance for Horizontal Drilling And High-Volume Hydraulic Fracturing to Develop the Marcellus Shale and Other Low Permeability Gas Reservoirs), the Department is proposing these revised regulations to ensure that potential environmental impacts resulting from HVHF are mitigated to the maximum extent practicable. This is consistent with the legislative objectives of guaranteeing beneficial use of the environment without risk to health and safety (ECL Section 1-0101(3)(b)), promoting and coordinating management of water, land, fish, wildlife and air resources to assure their protection, enhancement, and balanced utilization consistent with the environmental policy of the State taking into account the cumulative impact upon all such resources in promulgating any rule or regulation (ECL Section 3-0301(1)(b)).

Cost to the State: How can the HVHF process be approved by the State when the cost estimates to the state are unknown? Below is the statement from these proposed regulations which deals with the cost to the state. after an extensive “litany” of generalities of activities that need to be developed to support the permitting and monitoring of this process:

Costs to the Department and the State: The specifics and magnitude of actual costs that may be incurred by DEC and other state agencies cannot be estimated at this time. Based on DEC’s experience and existing program costs and examination of programs in other states, the implementation of these regulations can be expected to require a significant staff increase from the existing staffing levels of DMR and increase the need for additional staff to all the other divisions listed, as well as create a need for significant staffing increases in the affected regional offices. The costs of other agencies can be expected to be significant but lower, as the bulk of activities are the responsibility of the DEC.

What private sector business would approve a project with a statement that admits that the “costs cannot be estimated at this time”? Why should the State of New York approve a project whose “costs cannot be estimated”? The DEC is derelict in its responsibility in proposing regulations with this admission. This is another argument for withdrawing these draft regulations and starting over again.

This last sentence in the above quote from the revised regulations cannot be accepted in the absence of any estimates of cost to the DEC. Leaked documents from the Department of Transportation during the past year have indicated very high estimates of road maintenance costs as a result of HVHF, for example, to keep our roads in safe operating condition.

Costs to Local Governments: The discussion of the impact of HVHF on Local Governments and the costs associated with this is neither adequate nor accurate. While legally this process does not “mandate” certain expenditures, the “realistic” load on local municipalities, their law enforcement, hospitals, road repair and schools is very significant.

We are convinced that the following statement in the RIS is misleading.

“This proposal will not directly impose any significant service, duty or responsibility upon any county, city, town, village, school district or fire district. This proposal does not directly mandate the expenditure of funds by any sector of local government. A primary responsibility placed on local governments through this proposal will be to monitor requirements the proposal imposes on operators and owners in the HVHF process, to ensure that health, safety and the environment are adequately protected.”

This statement misleads the local municipalities into believing the impact of HVHF on their communities will be minor. This is not the experience in Pennsylvania, West Virginia, North Dakota, Wyoming, Colorado or Texas. There is much factual information based on experiences in these states to spell out and provide better guidance to our Local Governments on what the HVHF process will do to our local communities both in terms of cost and impact.

In reviewing the independent assessments of economists and the revised RIS, our association has concluded that the DEC has failed to comply with the requirements of SAPA in this section.

Rural Area Flexibility Analysis (RAFA)

The RAFA is significantly flawed and its findings are ludicrous. Statements such as the following are just not accurate in view of the experience of other states.

“...the Department does not expect public or private sector interests in rural areas to be adversely affected by the proposed changes to the Department’s existing oil and gas regulations ...”

Perhaps the DEC does not expect “the rural areas to be adversely affected” but they are wrong and out of touch with what has been going on in nearby states that have HVHF.

Another statement taken from the RAFA section referring to the plugging of abandoned well suggests that there will be no impact on the cost of plugging wells.

Enhancement of the Department’s minimum plugging requirements will also not adversely affect the regulated community, as the regulations provide only minimum standards and the Department regularly requires more stringent plugging procedures depending on site-specific circumstances. Therefore, due to current Department and industry practices, the costs associated with plugging a well by the either public or private sector in rural areas will not substantially change as a result of the proposed regulations.

It is reported that there are over 5,000 abandoned, non-plugged wells in the New York State, many of which are seeping gas into the environment²⁴. The HVHF process will generate many more wells which, if we follow past practices, will become abandoned and continue to seep gas into the environment. So if this paradigm is to change and abandoned wells are plugged, the costs will go up.

This further emphasizes why it is not prudent and in fact confusing to the public and our municipal officials to propose regulations before the dSGEIS is final. Substantive revisions to that document require that these revised regulations and SAPA documents should be withdrawn as they are based on the flawed and incomplete dSGEIS.

Our association's recommendation is that NYSDEC should abort the present process, go back and do it properly. Regulations should be drafted after a satisfactory and publically accepted SGEIS has been developed. We have only one chance to do it correctly. The gas has been there for 390 million years, another few years on this scale of things cannot be critical when the health and welfare of our citizenry is at stake.

Our association continues to be concerned about the adequacy of the oversight process that the DEC will be able to provide for this extremely complex and high risk exploitation of natural gas in New York's shale deposits. The vague rules and regulations and an understaffed agency dealing with a highly organized and richly funded industry seems like a disastrous combination for the residents and environment of New York State.

Our 30-year old association is over represents approximately 500 households and businesses in the Seneca Lake watershed, the largest watershed in the Finger Lakes Region. The mission of our association is to: "Enhance and preserve the quality of Seneca Lake." Today, this region enjoys a burgeoning wine, tourist and small manufacturing economy which are in balance with the bucolic nature of the countryside, villages and towns. A number of these municipalities have passed Home Rule legislation to prevent this region from heavy industrialization including HVHF. Our association views the present proposed regulations for HVHF as inadequate to preserve the environment and health of the residents of our watershed.

Sincerely,



Mary Anne Kowalski, President
Seneca Lake Pure Waters Association



Edwin Przybylowicz, Chairman
Marcellus Shale Committee
Seneca Lake Pure Waters Association

²⁴ <http://www.toxicstargeting.com/sites/default/files/overview-map.pdf>

cc:

Governor Andrew Cuomo, State Capitol

Lieutenant Governor Robert Duffy, State Capitol

Eric Schniederman, NY Attorney General

Commissioner Joe Martens, NY State Department of Environmental Conservation

Commissioner Nirav R. Shah, M.D., NY State Department of Health

Commissioner Rose Harvey, NY Office of Parks, Recreation & Historic Preservation

New York State Senate Majority Leader Dean G. Skelos

State Senator Mark Grisanti, Chairman, Environmental Conservation Committee

State Senator Thomas F. O'Mara, 53rd Senate District

State Senator Michael F. Nozzolio, 54th Senate District

State Senator Patrick M. Galivan, 59th Senate District

New York State Assembly Speaker Sheldon Silver

State Assemblymember Robert K. Sweeney, Chairman, Committee on Environmental Conservation

State Assemblymember Brian M. Kolb, 129th Assembly District State Assembly

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