



TOMPKINS COUNTY ENVIRONMENTAL MANAGEMENT COUNCIL

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November 19, 2009

Mr. Jack Dahl
Bureau of Oil & Gas Regulation
Attn: Comments on dSGEIS
NYSDEC Division of Mineral Resources
625 Broadway, Third Floor
Albany, NY 12233-6500

Dear Mr. Dahl,

We are writing you to give you our comments on the Draft Supplement to the Generic Environmental Impact Statement (dSGEIS) on the Oil, Gas and Solution Mining Regulatory Program under the New York State Department of Environmental Conservation (DEC)

INTRODUCTION

Natural gas is one way to tide US energy industry over until renewable energy sources can be developed for widespread use. We recognize that natural gas will continue to be developed. However, it must be done in a way that will protect our environment, the health of the public, and our investment in other sectors of economic development. We must ensure that the deleterious environmental and human health impacts observed across our nation are not repeated in the state of New York. A variety of green options are available, and we must take advantage of all of the technologies that our scientific community is providing for us.

Laws in place to protect our industries are interfering with our ability to evaluate health impacts, and, while not in the scope of the dSGEIS, the challenges described in the dSGEIS serve as an example of why greater chemical policy reform is direly needed. Despite these limitations, the DEC must recognize the potential threats from the increased amount of fracking chemicals that will be used in this new technology and perform a meaningful impact assessment.

Environmental health agencies are generally poorly funded. As we invite this new procedure into our state, we must provide the needed additional money to fund both the DEC and municipalities so that we can be proactive instead of reactive. At this time the State of New York is struggling with budget deficits that are threatening immediate drastic cuts to education, health care, social welfare, roads and other transportation infrastructure, and many other areas of need. Thus it is unlikely that sufficient money will be appropriated by the legislature for the needs of the DEC and municipalities. We believe that the fees charged for drilling permits must be high enough to cover these needs. The corporations that will profit from natural gas sales should be required to pay the full costs its production. The cost of a permit should cover the salaries of the DEC staff required to do office reviews, permitting, field monitoring, and to complete the studies cited in the dSGEIS that have not yet been complete. In general the permit costs should cover the cost of DEC time invested in facilitating this use of natural resources.

The dSGEIS in many ways seems incomplete. Studies are ongoing into effects such as aquifer depletion, effects of waste disposal, and the identification of green chemical alternatives. In order to ensure that high volume hydraulic fracturing does not negatively impact environmental and human health, these ongoing assessments must be completed. We believe that the DEC did not take sufficient time to conduct the necessary research to protect our environment prior to proposing regulations. The following document outlines ways in which the dSGEIS can be improved, however it is the belief of our council that it would be best for the DEC to produce a more complete document and present to the public again for comment and review.

The purpose of a Generic EIS is to cover the issues that will be common to all or most drilling operations and to determine what can be approved as having no significant impact, what mitigation measures will be required for specific potential impacts, and what actions will not be allowed because they cause unacceptable impacts that cannot be mitigated. The point is to minimize the need for individual examination of each proposed well. This would allow the drillers to know in advance precisely what is required of them and would reduce later involvement of the DEC to ensure that the operation is done in accordance with the requirements of the GEIS.

In many areas the dSGEIS does exactly this. For example, the requirements for casing and cementing boreholes through aquifers, or for constructing retention ponds, are spelled out in detail. But when addressing other concerns (such as the composition of fracking fluids) the dSGEIS fails to take a generic approach. Instead it calls for individual EAFs and individual review, which only serves to postpone critical choices to a later time, increase workload and uncertainty for everyone involved, and will likely result in inconsistent outcomes.

The dSGEIS neglects to assess cumulative impacts in many cases, despite the fact that this was brought up by several groups (including the EMC) during the scoping process. While it may not be possible to predict the level of development that would occur with no restrictions in place, it is possible to predict levels of development that are acceptable and set boundaries accordingly. For example, it is a widely used practice for State agencies to limit the number of recreational permits each day for citizens wishing to take a boat on certain rivers. Limitations on industrial use of our natural resources should be as protective as those for recreational use. We urge the DEC to look for acceptable limits when evaluating cumulative impacts as it finalizes the SGEIS.

Our comments focus on specific topics that we were able to address during the commenting period and provide suggestions about areas where additional research and clarity are required. Our specific requests are bulleted following each discussion.

CONTENT:

- Cumulative Impacts**
- Required Hydraulic Fracturing Additive Disclosure**
- Assessing Hydraulic Fracturing Additives**
- Specific Chemicals of Concern**
- Handling of Fluids on Site**
- Disposal of Wastes**
- Well Water and Surface Water Testing**
- Water Withdrawals**
- Responsibilities for the County**
- Lead and Involved Agencies**
- Mitigating Community Character Impacts from Truck Traffic**
- Road Use Agreements**
- Re-evaluation**

Cumulative Impacts

The increase in chemical use associated with high-volume horizontal drilling requires a more thorough assessment of cumulative impacts. High-volume horizontal drilling requires massively greater amounts of fracking fluids for each well. The dSGEIS addresses this with respect to water withdrawals but not with respect to potential impacts from the fracking fluid chemicals.

The current GEIS describes a typical hydraulic fracturing job to require 80,000 gallons of fracturing fluids (Ch3.2.1.1 dSGEIS). The dSGEIS states in Ch5.7 that 2.4-7.8 million gallons of fracking fluids may be required for one horizontal well. Ch5.4 states that fracturing fluids will comprise up to 2% of chemical additives. Assuming that the concentrations of fracking additives are similar for the two processes, we offer the following table to demonstrate the increased amount of chemical usage associated with high-volume horizontal drilling, compared to the currently approved methods in the GEIS. The proposed drilling methods require up to 100X more chemicals. Applying the prediction of approximately 2000 drilling permits per year (Ch9), we can expect about 1million tons of fracking chemicals will be used each year for high-volume drilling in NY State.

	High Volume Horizontal Well	Standard Vertical Well
Gallons Fracking Fluid / Well	2.4 – 7.8 million	80,000
Liters Fluids / Well	9.08-29.5 million	302,824
Metric Tons of Additives / Well	182-590	6

The discussion of Potential Environmental Impacts of Cumulative Effects in Ch6.13 is too brief. The discussion of Site-Specific concerns about multi-well pads states that “noise, visual, and community character issues are the same as those of individual well pads”. Each individual well in the multi-well pad is a bigger project requiring more fracking and trucking and each pad site will experience the drilling of several wells, therefore this statement of equality seems inaccurate. This section makes some preliminary attempts to evaluate truck traffic but then claims that the severity of impacts are subjective and difficult to quantify. The dSGEIS refuses to set any thresholds, and it goes on to say that “any limitation on development... is more appropriately considered in the context of policy making, primarily at the local level, outside of the SGEIS”. It seems unlikely that municipalities will have the funding or the expertise to be able to establish such limitations.

- Impacts and mitigations for the increased quantities of fracking fluids additives must be discussed in the SGEIS with respect to contamination, waste treatment, and trucking.

Required Hydraulic Fracturing Additive Disclosure

The assessment of chemicals in fracking fluids is essential for understanding new impacts from the proposed drilling. Ch8.2.1.2 describes chemical disclosure requirements for obtaining a drilling permit but they are tiered and confusing. The dSGEIS proposes requiring "full chemical disclosure" for open surface impoundments versus "identification of additive products and proposed percent by weight of water" for applications that do not propose open surface impoundments. It is unclear how these two requirements differ, but it seems that the request for identification of additive products does not specify a need to identify specific ingredients. We believe that NYSDEC has the legal right to request full chemical disclosure for internal review for all drilling operations. Requiring the full disclosure for all drilling permits this will make the

rule easier to enforce and will allow a more thorough review of the impacts these chemicals may have.

- Full chemical disclosure of ingredients and proportions must be required for all drilling permits.

The DEC must arrange for or establish a program to maintain all fracking chemical information. That information should be available under confidentiality agreements with physicians, nurses, and first responders in emergency situations; whenever it is requested by medical professionals treating patients with long term chronic illnesses that may be linked to environmental exposures; and when required to clean up spills or other accidents. This step would be supportive of the Ch 7.11 proposal for “coordination with local emergency management agencies” as a mitigation approach for road use impacts. It would also be supportive of the Planning and Local Coordination proposed in Appendix 10. A similar requirement has been made under Colorado’s New MSDS Maintenance and Chemical Inventory Rule described in Ch5.18.4.1

- The dSGEIS must establish a means to maintain full chemical information and share that information with physicians, nurses, and first responders in emergency situations; whenever it is requested by medical professionals treating patients with long term chronic illnesses that may be linked to environmental exposures; and when required to clean up spills or other accidents.
- A protocol for obtaining chemical information must be made clear to assist in local planning and road use.

Chemical information must also be made available for scientific review so that more can be learned about the potential human and environmental health impacts. Non-industry entities must be afforded the opportunity to gain access to this information under confidentiality agreements.

- Chemical information must be made available for scientific review.

Finally, we recognize the statutory protections chemical companies enjoy for trade secrets. However, the DEC should encourage chemical manufacturers and drilling interests to recognize the public benefit of voluntarily disclosing proprietary chemical formulations used for fracking fluids.

- The SGEIS should indicate an aim to obtain more fracking fluid ingredients by encouraging chemical manufacturers and drilling interests to recognize the public benefit of voluntarily disclosing proprietary chemical formulations used in fracking fluids.

Assessing Hydraulic Fracturing Additives

A meaningful generic approach should provide a short list of additives or combinations of additives with specified concentrations that are deemed acceptable with respect to health impacts. Then any driller who uses these additives in prescribed concentrations and with defined practices, would not need further individual approval in this area. This would facilitate and speed up approval of fracturing operations that use the already approved fluids. Other additives or combinations would not need to be prohibited, but should not be covered under the SGEIS and should require individual environmental review before being approved. Some chemicals should be banned, however, and by having predetermined lists of safe and unsafe chemicals, the DEC’s hand would be strengthened in approving or refusing to approve chemicals to be used. This

would also be an advantage for effective baseline testing of ground and surface water, as parameters could be based on the specific chemicals that will be used and that pose a contamination risk.

Ch 5.4 discusses hundreds of specific chemicals that may be used in fracturing fluids. Ch 5.4.1 lists desirable properties for additives, including minimal environmental effects, but does not identify which additives meet these criteria. Ch 5.4.3.1 lists many serious health hazards associated with the chemicals in fracturing fluids along with the statement that “toxicity data are very limited for many chemical additives to fracturing fluids.” Ch 5.4.3 discusses health information for classes of chemicals, but fails to set restrictions on which may be used based on these effects.

- The DEC should identify a set of additives and concentrations that would minimize environmental and human health impacts. If drillers wish to use alternative chemicals they must be required to furnish an additional environmental review for approval.

Section 9.3.1 discusses preliminary work into identifying green chemical alternatives. Standards have been set in other countries (as described in the URS report). Green fracking fluids are available in the U.S., but no green standards for fracking fluids have been established in the U.S. The section seems incomplete, as the research by the DEC has not yet come to a conclusion about which set of regulations or restrictions to follow.

- The DEC must return to the line of investigation in Ch 9 and identify green chemicals that they recommend for use in NY.

In the next section we discuss the unexplained, frequent and high concentration occurrence of 4-Nitroquinoline-1-oxide in flowback fluids, a chemical of concern. This highlights a failure of the disclosure process to reveal relevant ingredients. This also represents a failure of the DEC to recognize a chemical threat because they do not comment on it in this report. The present level of assessment of chemical ingredients in the dSGEIS combined with the limitations of disclosure presents an unacceptable health risk.

- The DEC must find ways to work within the limitations of our current environmental law and regulatory authority to enable a meaningful protective assessment of chemicals introduced into our environment.
- The DEC must provide better guidelines for which chemical additives to avoid for environmental or human health reasons. A more thorough assessment of the chemical additives must be conducted in order to identify persistent, bioaccumulative, and toxic compounds. The SGEIS should restrict the additives that may be used on the basis of these assessments.
- Testing of flowback should be continued, and the results should be evaluated as part of the fracking fluids’ health impacts assessment.

The dSGEIS fails to sufficiently evaluate ground and surface water as potential exposure pathways for fracking fluids, despite the fact that groundwater contamination was prioritized in comments during the scoping process (Ch6.1). The dSGEIS underestimates the importance of groundwater as a potential exposure pathway for fracking fluids based on the following entries. Ch 8.2.1.2 states that “...adequate well design prevents contact between fracturing fluids and fresh ground water sources...” Ch6.1.4.2 quotes an ICF International study that finds “the probability of fracture fluids reaching a USDW (Underground Source of Drinking Water) due to failures in the casing or casing cement is estimated at less than 2×10^{-8} (fewer than 1 in 50

million wells)". Despite the assurances given in the dSGEIS that risks are low, an EPA investigation in Pavillion, WY has linked well water contamination with hydraulic fracturing. It is believed by our council that water contamination events are difficult to track and prove due to the abundance of out-of-court settlements. Thus, while not always well documented, it is obvious that groundwater has been shown to be a possible exposure pathway. Ch6.1.3 gives slightly more validity to concerns about surface spills, but still fails to discuss impacts. The DEC must look beyond defending the low probability of water contamination in Ch.6 and offer information on the human and environmental health impacts that could be anticipated due to contamination.

- Ch6.1 on the Potential Environmental Impacts on Water Resources must be updated to include the actual human and environmental health impacts that could be anticipated due to water contamination.

Specific Chemicals of Concern

Ch5.11.3 table 5-9 and the discussion for aromatic hydrocarbons that follows shows that BTEX compounds are present in higher concentrations when petroleum distillates were used in drilling operations in PA and WV. BTEX compounds are found in gasoline and diesel fuel and are regulated by the Safe Drinking Water Act. They are of primary concern because of the carcinogenicity of benzene. In the 2004 US EPA Evaluation of Impacts to Underground Sources of Drinking Water by Hydraulic Fracturing of Coalbed Methane Reservoirs (EPA 816-R-04-0003) the EPA recognizes that diesel fuel contains BTEX compounds and they address the issue through an agreement made with three major drilling companies. In an attempt to minimize the potential for introduction of these compounds into drinking water, the EPA asked the three main drilling companies to eliminate diesel fuel from their hydrofracturing fluids (an action believed to affect 95% of hydrofracturing projects). As the majority of drilling activity has been conducted without diesel, viable alternatives do exist. The DEC states in the dSGEIS that no drillers have expressed the intent to use petroleum distillates, but intent is not a sufficient prevention.

- Benzene, toluene, ethylbenzene, and xylenes (BTEX compounds) must be banned from use in fracturing fluids in NY State.

Ch5.11.3 Table 5-9 shows concentrations of constituents in flowback water. 4-Nitroquinoline-1-oxide (a carcinogen) was present in all 24 samples at surprisingly high levels: 1,422(min), 13,908(med) & 48,336(max) mg/L. The discussion that follows does not mention this compound and it is not listed as a disclosed additive in table 5-6 Chemical Constituents in Additives. It is unclear why this chemical was present in the flowback because it was not disclosed as a fracking fluid additive. It is unclear what kind of threat this chemical poses as it is not a common pollutant, but its listing as a carcinogen warrants additional review.

- The frequent and high concentration occurrence of 4-Nitroquinoline-1-oxide in flowback must be investigated and a priority should be set to determine if its use in fracturing fluids should be banned in NY state.

Handling of Fluids on Site

The dSGEIS provides a wealth of discussion about the storage of fluids on site. Ch5.11.2 describes storage options for flowback water, such as lined pits and tanks. It is suggested here

that the DEC may require that flowback water be stored in tanks on site unless data is provided to support an alternate proposal. However it is not clear what will be required of alternate proposals. Ch6.1.3.3 explains that concerns of contamination to surface water and groundwater are magnified with the use of large centralized impoundments for flowback water. Ch6.4 explains that the use of centralized impoundments for flowback water is one of the three areas of unique concern for ecosystems and wildlife imposed by high volume hydrofracturing. Ch6.5.1.8 states that methanol may pose an air pollution threat if flowback fluids are stored in open centralized storage impoundments. It seems clear that the use of open storage impoundments pose additional risks compared to tanks.

Mitigation measures such as specific liner systems, leak detection systems, and gates and caps are discussed in Ch5.12.2.1 and other measures to limit waterfowl access to pits are discussed in Ch6.4.2. However no requirements are stated. Furthermore, it is unclear if the assumption that short term exposure of waterfowl to these fluids will cause no harm is valid. We are also concerned about the practice of burying liners with considerable amounts of fracking additive residue in the western U.S. as this introduces chemicals into the earth and makes them available to leaching into water. Ch7.1.7.4 explains the benefits of the use of tanks instead of open pits. While the initial cost is greater, these containers can be reused and the potential for on-site spills is less. Ch7.1.3.4 Proposes a requirement that all flowback fluids be stored in steel tanks.

- All flowback and fracking additive containing fluids must be stored in tanks.
- If the DEC should decide that pits are acceptable, all pits should be capped to exclude wildlife and protect the natural environment. On-site burial of pit liners should not be allowed.
- We support the recommendation to require steel tanks for all fracking fluids and flowback, and this should also include partially treated flowback fluids being stored for reuse.

Disposal of Wastes

The disposition of brines is of concern because of the presence of heavy metals and naturally occurring radioactive materials (NORMs). Ch5.16.6 states that one option for disposal of brines is road spreading for dust control and deicing, and that to do this a petition must be made for beneficial use determination (BUD) on the Part 364 permit. Ch5.16.7 states that the DEC does not presently have sufficient information to assess mitigation needs with respect to NORMs in brines, and that additional samples will need to be collected for assessment. Ch7.1.6.2 discusses characterization parameters for Marcellus brines for a BUD petition, including barium, BTEX, and radioactivity. It states that the DEC will deny permits if levels indicate a potential public exposure concern. However, given the need for additional data, it is unclear how this decision will be made.

Table 8.1 lists both local governments and the Division of Solid and Hazardous Materials as having a “Primary role” in road spreading. The municipalities will be guided by the toxicity standards set by the research of the DEC, since they have no research capabilities themselves. However, they may have access to other information (such as the location of sensitive areas) that will assist in making a decision about road spreading.

- Permits must not be issued for road spreading of brines until sufficient data has been collected and assessed to understand the impact of NORMs. The DEC must clearly state this.

- The DEC should determine safe levels of all the parameters of concern (including heavy metals, aromatic hydrocarbons & NORMs) and set standards that will trigger a rejection of a BUD petition. These standards must be made public so that citizens can evaluate the methods used by the DEC to make their decision to allow road spreading. These safe levels can be set prior to collecting more data on the composition of brines.
- As the DEC sets standards for safe levels of parameters in brines, considerations must include human exposure pathways, wildlife exposure, and deterioration of habitat (both terrestrial and aquatic) due to road spreading activities.
- If road spreading is determined to be an acceptable practice, municipalities must be guaranteed a right as an involved agency in the SGEIS.

Ch5.13.3 discusses flowback water disposal via WWTPs and cites the use of SPDES permits to ensure that there are no impacts on the receiving water. Despite SPDES permits, WWTPs are still inefficient at pollutant removal and can serve as a source of toxic emissions into water bodies. Cumulative impacts from fracking chemicals could be mitigated by requiring fracking additives to be readily biodegradable, and the DEC's investigation into green alternatives in Ch9 should allow them to identify appropriate chemicals.

- Fracking additives must be restricted to those that are easily biodegraded in order to minimize cumulative impacts on municipal water supplies downstream from the WWTPs and on aquatic life in close proximity to WWTPs.

Black shales are often high in pyrite. The dSGEIS recognizes this fact for Utica shale in Ch4.3. Pyrite is the mineral that is responsible for acid mine drainage. Given the higher than usual amounts of cuttings that will require disposal in high-volume hydraulic fracturing, the potential for acid drainage must be assessed in the dSGEIS.

- The presence of pyrite in black shales as potential source of acid drainage should be discussed in chapters 5,6 & 7.

Well Water and Surface Water Testing

Ch7.1.4.1 discusses private water well testing procedures and parameters. Briefly, testing will occur at wells within 1000ft of the drilling site: prior to drilling, every three months during drilling of a multiwell pad, and 3 and 6 months and 1 yr after drilling ceases. After that, additional testing will only be done in response to complaints. The additional identified parameters (to reflect drilling activities) seem fairly reasonable and we are generally supportive of this testing plan. However, we have some suggestions on how to improve the water testing plans.

Surface water sources are susceptible to spills. The recent surface spills in Dimock, PA that contaminated Stevens Creek and caused fish kills are an example. Surface water is used by both wildlife and humans for public drinking water and recreation, and this water must be protected as well.

- The water testing plan should be modified to include surface water testing.
- The surface water testing plan should focus on the time frame that fracking fluids are in use at the site.

The way in which water quality data will be evaluated is not clear. How much will the water quality of a given sample have to change for the change to be considered significant?

- The DEC must specify how water quality data will be evaluated and what criteria will be used to determine if well water or surface water has been impacted by drilling-related activities.

During the investigation of a complaint, the DEC will visit the drilling site and determine if any “documented potentially polluting non-routine well pad incidents” have taken place (Ch 7.1.4.1). If they observe one of these events, then they will consider the need to suspend the operation. While it is good to have a list of possible problems to look for, what if one of these events cannot be identified at the drilling site? Aside from stopping the drilling, what processes are in place to allow the water well or surface water owner to be compensated?

- The DEC must acknowledge that some accidents will not be easily linked to a list of possible problems. The DEC must not preclude such accidents from the protective measures offered when a spill can be easily seen at the surface.

The DEC should also consider all available technologies for identifying contamination events, such as adding a tracer chemical to the fracturing fluid. This should be a non-toxic chemical that is not naturally occurring in the area and is easily tested for and detected. It should also be something that migrates easily so it will not lag behind other chemicals that it is meant to trace. If more than one suitable tracer compound can be identified, different drilling companies can be assigned different tracers, thus simplifying the task of determining who is responsible for any contamination that may occur. There is a caveat, however: presence of the tracer would “prove” that contamination came from drilling, but absence of the tracer would not disprove it. Fractures between confined underground water bodies may result in contamination of water sources by brines or gases not directly coming from fracking fluids, and differences in chemical properties may result in contamination from some additives but not the tracer. The use of a tracer would be of great value in identifying some instances of water contamination from drilling and hydrofracturing operation. At the same time, the limitations of this tool must be recognized in order to use it appropriately.

- The DEC should consider new technologies that will assist in identifying contamination events and reduce the burden of proof once a problem has occurred.

Water Withdrawals

Concerns about water withdrawals and depletion of surface and ground water supplies are numerous. Section 6.1.17 states that withdrawals for hydrofracturing are considered 100% consumptive use, but it is unclear if this approach is embraced uniformly across the evaluation process. If fracking fluids are not accepted for treatment at WWTPs in a given area then the water use will be 100% consumptive for that area. Some of our municipalities already have a shortage of available groundwater and those close to Cayuga Lake tend to rely on this water source. The SRBC and DRBC have more experience and better programs for evaluating water usage than the Great Lakes region. We are concerned that the Great Lakes region (in which most of Tompkins County lies) will not be adequately protected. The section 7.1.1.4 describes the “Natural Flow Regime Method” to assess impacts on surface water, as an alternative to methods used by the other basin commissions. Section 7.1.1.1 states that the DEC is currently evaluating concerns about aquifer depletion associated with increased groundwater usage. We stress the need to prioritize the evaluation of cumulative impacts on water supply quantities.

- The DEC should prioritize establishing regulations for protection of the Great Lakes region that are as protective as those set by the SRBC and DRBC.
- Data from the aquifer depletion studies should be incorporated into regulations in the dSGEIS to protect aquifers.
- Water withdrawals for fracking should be considered 100% consumptive use in all evaluations in the dSGEIS across the board.

The potential adverse impacts of water withdrawals are listed and discussed in Chapter 6 on pages 6-4 to 6-8, but the effects on agriculture are not addressed. Agricultural activities in the region where gas drilling is proposed include vineyards, wineries, dairies, and various types of organic farms. Sizeable nearby water supplies are key to the economic success of NY farmers, especially in years of drought.

- The effects of aquifer depletion on farm operations should be analyzed in Ch 6.

Responsibilities for the County

Ch7.1.4.1 discusses private water well testing procedures. In this section it is stated that under the proposed protocols, county health departments will receive the results of baseline testing and ongoing monitoring. It is then noted that the DEC has memorandums of understanding (MOUs) in place with several county health departments in western NY whereby the county health department initially investigates a complaint and then refers it to DEC when a problem has been verified and other potential causes have been ruled out. The DEC proposes to extend this arrangement statewide, but it has not consulted counties in the matter. It seems unlikely that county health departments will accept this wholesale delegation of responsibility for receiving and storing test results and investigating contamination complaints. Counties have neither the resources nor, in many cases, the expertise to carry out this function. By citing the MOUs the DEC concedes that evaluating complaints about contamination is its responsibility, which in some cases it has delegated to county health departments by mutual agreement. Absent voluntary MOUs, the DEC has no authority to impose this burden.

- The SGEIS should acknowledge that receiving and maintaining well test records and investigating contamination complaints is the responsibility of the DEC.

Lead and Involved Agencies

Ch3.2.1.4 States that the DEC will seek lead agency status for all drilling permits, but also acknowledges that involved agencies must agree on the lead agency. The specifics of who is an involved agency are not dealt with here. Table 8.1 designates local governments as primary regulators in three areas related to drilling and hydro fracturing, but Ch 8.1.1.3 states that towns will be notified only of the first drilling application and will thereafter be expected to monitor the DEC's public web site to learn about additional permit applications. This is insufficient notice to entities that should have a key role in the drilling and certainly have a right to be treated as involved agencies.

- The DEC should notify every municipality in which an application is made for each drilling permit, and should afford those municipalities the opportunity to be listed as involved agencies.

Mitigating Community Character Impacts from Truck Traffic

Ch7.12 Mitigating Community Character Impacts fails to provide a generic mitigation of the community character from intense truck traffic required to support a multi-well site approach. Ch9 indicates that the industry expects to develop one area of the state at a time. Ch6.11 describes road use and anticipates up to 8,905 trips per multi-well pad, and the pad spacing restriction is one for every 640 acres (1 sq mile). Tompkins County comprises a total of 476 sq mi and 37% of the land has been leased for gas drilling (176 sq mi), thus 1,567,280 truck trips could be required to support gas development in our county over a relatively short period of time. By any standard, this intensity of trucking is more suited to an industrial area and will have a severe impact on the rural residential nature of upstate New York. Alternative Actions Ch9.2 states that “Phased permitting as a means to mitigate regional cumulative impacts is not practical or necessary given the inherent difficulties in predicting gas well development for a particular region or part of the state”. We disagree and believe that despite difficulties with predictions, thresholds can be set for acceptable levels of development.

- The DEC should take a generic approach to addressing the impact of trucking on a given area by limiting the number of truck trips or the number of developed sites for a given area during a given time period.
- The DEC should provide a method (lottery, first come first served, or some other approach) for determining which wells will be permitted first when applications exceed the limit for a given area and time period.

Road Use Agreements

In Ch 8.1.1.5 “The Department strongly encourages operators to attain road use agreements with governing local authorities.” It then makes the contradictory statements that “the Department does not have the authority to require, review or approve road use agreements or trucking plans,” but that “the proposed Supplementary Permit Conditions for High-Volume Hydraulic Fracturing require a road use agreement or trucking plan be filed with the Department for informational purposes prior to site disturbance.” The proposed EAF Addendum describes additional submissions required prior to site disturbance, including a “road use agreement with local governing authority OR a trucking plan and documentation of efforts to obtain a road use agreement”. If local agencies have a regulatory role in road use (as stated in table 8.1) then a road use agreement must be obtained or the drilling company must furnish a waiver from the town declining to establish a road use plan.

- If the DEC can require that a road use agreement be filed, it should do so. Such an agreement must be approved by appropriate town officials before site disturbance is conducted. It must also be required as part of the EAF Addendum. If towns decline to participate in establishing a road use agreement then a waiver from the town acknowledging this must be submitted with the trucking plan.
- The DEC should provide a model road use agreement for towns to assist them in ensuring that critical topics are covered.

Re-evaluation

There are several unknowns in the assessment of high-volume drilling. The DEC should continue to assess cumulative impacts, green technologies, impacts of water withdrawal, waste disposal and other concerns. As this new technology is used in our state the DEC should set

guidelines for re-evaluation of environmental effects so that permit requirements can be updated to ensure the safety of drilling.

- The DEC should re-evaluated new technologies and effects of drilling on a 3-5yr basis.

CONCLUSION

We appreciate the opportunity to comment on the dSGEIS and we regret that the length of the document has prevented us from commenting on every aspect. We hope that the wide diversity of groups that will comment on this document will help you to improve the SGEIS. We feel that all of the topics discussed in this letter are extremely important that drilling not should proceed until all of these topics have been fully addressed.

Sincerely,



Amy Risen, Chair
Tompkins County Environmental Management Council

Copies:

NYDEC Commissioner Peter Grannis
FRAC Act Sponsors in the House and Senate Counterpart-Diane DeGette, Maurice Hinchey, Jarid Polis, Bob Casey, Chuck Schumer
NY Senate Committees: Environmental Conservation (via Antoine Thompson), Health (via Thomas Duane), and Local Governments (via Andrea Stewart-Cousins)
NY Assembly Committees: Environmental Conservation (via Robert Sweeney), Health (via Richard Gottfried), Local Government (via Sam Hoyt) Oversight of the DEC (via Adam Bradley), Science and Technology (via Francine DelMonte), Toxic Substances and Hazardous Wastes (via Mike Spano), and Water Resources Needs of NYS and Long Island
Tompkins County Legislature
Tompkins County Planning Department
Tompkins County Council of Governments
Tompkins County Water Resource Council