

New York State Department of Environmental Conservation

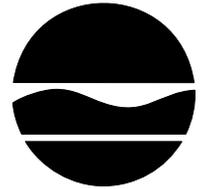
Division of Mineral Resources

Bureau of Oil and Gas Regulation, 3rd Floor

625 Broadway, Albany, New York 12233-6500

Phone: (518) 402-8056 • FAX: (518) 402-8060

Website: www.dec.ny.gov



Alexander B. Grannis
Commissioner

July 11, 2008

[Operator]

Re: Hydraulic Fracturing of Shale Formations for Gas Production

Dear [Operator]:

As you aware, there has been much focus in the press and at public forums recently on potential environmental impacts associated with anticipated hydraulic fracturing of horizontal shale wells expected to commence drilling in the coming months. Frac fluid volumes may exceed descriptions in the Generic Environmental Impact Statement on the Oil, Gas and Solution Mining Regulatory Program, which found that the action of drilling an individual well, including stimulation, does not usually have a significant environmental impact. To address concerns regarding larger frac jobs, Department staff seek to compile factual data regarding the use and handling of fluids and materials associated with hydraulic fracturing of shale formations in New York.

The Department's records indicate that you have recently permitted and/or drilled the vertical shale wells listed below. Please add any additional shale wells you have permitted or drilled in New York which you intend to hydrofracture or have hydrofractured, and provide the information listed below for each well by **August 15, 2008**. For any listed well which has not been or will not be hydrofractured, please so indicate. We are aware that vertical wells would not require the same volumes of frac fluid as would horizontal wells, but our understanding is that frac fluid composition will be similar. Please describe any anticipated differences, with respect to both fluid composition and fluid handling, between vertical and horizontal shale well hydrofracturing.

API Number	Well Name	Target Formation
[List of wells]	[List of well names]	[Formation name]

Staff's intent is to summarize and reference this information in an evaluation of the effectiveness of current regulatory processes to address the concerns that have been raised. Should any of the responses indicate a need to strengthen controls on any aspects of use and handling of frac fluids, the Department will take appropriate steps to implement such improved controls.

1. Volume and source of fresh water which was or will be used to complete/stimulate these wells.
2. Name, address and contact information for the service provider who designed the frac fluid mix, if not done in-house, and the same information for the service provider who actually performed the frac work, if different.
3. For any instances where water wells did or will provide the source of fresh water, describe construction of these wells, water volumes that were or will be pumped and frequency of pumping. For wells which have already been hydraulically fractured, provide information regarding any baseline water analysis you performed on nearby residential water wells, the distance to such wells and any known impact. For wells which have not yet been hydraulically fractured, provide location and depth information from your files, if any, for residential water wells within 2,000 feet of the wellsite, and the results of any known water analysis or description of any baseline water testing you intend to perform.
4. Description of how each component of the frac fluid was or will be transported, contained and stored on the site, and of any mixing that did or will occur on site.
5. Composition, volume and form of each component of the frac fluid (excluding fresh water) as it arrived or will arrive on the site, prior to any on-site mixing, with concentrations of the fluid constituents expressed in $\mu\text{g}/\text{liter}$. Please also state any BTX concentrations in parts per billion as well, and specifically state whether diesel fuel was or will be included in the frac fluid.
6. Composition and volume of frac fluid as it was or will be injected, after any mixing, with concentrations expressed in $\mu\text{g}/\text{liter}$.
7. For wells which have already been hydraulically fractured, flowback volume and results of any analysis that was done on the returned fluids with concentrations expressed in $\mu\text{g}/\text{liter}$. Please combine the response to this and the previous item in tabular or spreadsheet format.
8. Results of radioactivity testing at the wellsite if any was done.
9. Material and safety data sheets for all frac fluid additives. If you have already provided MSDS sheets to the Department, a notation to that effect will suffice.
10. Sizes and liner specifications of any pits that were or will be used for frac and/or flowback fluid storage on site. Pit liner specifications include trade name of the liner product used, material, thickness, tensile properties, low temperature cold crack, seam strength, and tearing strength. As applicable, describe the method to seal pit liner seams or indicate that the pit liner consisted of one continuous sheet. Describe equipment and procedures that were or will be used to ensure pit liner integrity, including any diverters or baffles. State the length of time that frac and/or return fluids were or will be stored in on-site pits. If tanks were or will be used instead of pits for any step of the process, please so indicate and provide details.

11. Description of how returned fluids were or will be removed from the site and their ultimate disposition. Specifically identify and provide the location of any ultimate disposal site.
12. Actual or estimated duration of each phase of operations including site construction, drilling, water hauling, hydrofracturing, flowback, disposal of spent frac fluids, and pit reclamation.
13. Actual or estimated duration of well testing and description of actual or estimated impacts to adjacent residents, particularly potential for noise impacts during an extended test.
14. For wells where hydraulic fracturing has already occurred, detail any complaints received from nearby residents, the public, or local governments, the results of your investigation of such complaints, and how they were resolved.

Please do not hesitate to contact me if you have any questions regarding this request. I look forward to your full response by **August 15, 2008**. Thank you in advance for your anticipated cooperation.

Sincerely,

[Chief, Permits Section]