

## **Comments on the Draft Supplemental Generic Environmental Impact Statement of September 2009**

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My comments pertain to the need to expand and clarify **Chapter 7.1.4.1 Private Well Water Testing**

### *Schedule*

The SGEIS should specify a time frame for when baseline water quality samples are collected prior to the start of drilling (e.g., within one year prior to the beginning of drilling activity).

Consistent terminology should be defined for different steps in the monitoring schedule described on page 7-39 and used elsewhere in the document. For example, the language on page 7-41 “initial, pre-drilling or baseline round of sampling” should be edited to match this terminology.

Many homeowners with private water wells do not regularly test their water. Coliform bacteria are a common contaminant of private wells in upstate New York and Pennsylvania. The SGEIS does not discuss what will happen if baseline water quality test results indicate problems (e.g., coliform bacteria or high nitrate+nitrite concentration over primary drinking water standards). Will the homeowner have time to investigate or address the problem before the drilling permit is granted or drilling begins?

### *Parameters*

The proposed water testing program will rely on private sector water testing labs certified by the NYS Department of Health (DOH). The SGEIS should state that testing labs must be financially independent of both homeowners and gas drilling permit applicants. The SGEIS should state clearly that measurement of static water level and collection of water quality samples must be done by third-party staff of certified labs, not by homeowners or gas drillers or their representatives.

The GEIS should specify where in the plumbing system samples should be collected (at the well, in-house but before water treatment equipment, at the tap, etc.).

The dSGEIS refers to labs in the DOH Environmental Laboratory Approval Program (ELAP, footnote 40 on page 7-38). Two lists of labs are relevant for the proposed well water testing

program. For radiochemistry (Table 1 below), there are only seven in-state labs certified to test for gross alpha and beta in potable water, none of which are located in the Utica/Marcellus shale gas drilling portion of the state. Potable water quality testing for other parameters would be done by labs listed on the commercial list, which accept samples from the private sector (Table 2). Many labs are certified only for air quality analysis, such as household radon. There are 89 labs in NY and northern PA certified to test potable water. Only 32 of those labs are located in or adjacent to the central part of upstate NY where shale gas drilling will occur (including eight labs in Onondaga and Albany counties, and none in several counties including Broome and Chemung). Labs certified to test potable water are certified to test particular compounds; not all labs are certified for all of the compounds on the proposed testing list. This means a relatively small number of labs are available in the main gas drilling area for some water quality tests.

For accurate test results, water samples must be stored properly between collection and testing, and this is more challenging if local testing labs are not available. For example, bacterial growth is affected by temperature; dissolved gases and volatile chemicals such as methane, hydrogen sulfide, and benzene are affected by temperature and agitation; and pH is affected by temperature and agitation with air (dissolved carbon dioxide affects pH).

Prior to granting permits and regularly thereafter, DEC should coordinate with DOH to verify that there is sufficient certified testing capacity for the drinking water well testing program.

The list of analytes on pages 7-40 and 7-41 should be merged into a single list. DEC should work with DOH, county health departments, and testing labs to develop standardized reporting tools for the private well water testing program.

Approved analytical methods should be identified either for individual analytes, or by reference to the DOH approved methods for which labs are certified (e.g., ELAP Certification Manual 180.1, [http://www.wadsworth.org/labcert/elapcert/certmanual/I180\\_1\\_05.pdf](http://www.wadsworth.org/labcert/elapcert/certmanual/I180_1_05.pdf)). The methods should be reviewed to highlight potential interferences, e.g., a high chloride concentration can interfere with other analytical methods.

The test for “surfactants” should be described in more detail. Surfactants is a general term that includes several different classes of chemicals. Approved methods should be able to detect the surfactants used in the gas drilling process.

When the list of analytes is finalized, sampling protocols should specify the number of samples to be collected, and whether replicate field samples should be collected. Some groups of analytes may be subsampled from a single field sample, but some analytes may need their own collection bottles if they require preservatives or different storage conditions.

Table 1. ELAP-Certified Laboratories for Potable Water Radiochemistry. (<http://www.wadsworth.org/labcert/elap/radiochem.html>, retrieved 12/23/09)

County	Number of Labs	Lab ID#	Tests for which lab is certified
Albany	1	10762	Gross Alpha, Gross Beta, Radioactive Cesium, Photon Emitters, Tritium, Iodine-131, Radium-226, Radium-228, Strontium-89, Strontium-90, Uranium (Activity)

Cattaraugus	1	10474	Gross Alpha, Gross Beta, Photon Emitters, Tritium
Erie	1	11179	Gross Alpha, Gross Beta, Photon Emitters, Radium-226, Uranium (Activity)
Onondaga	1	10155	Gross Alpha, Gross Beta, Radium-226, Radium-228
Rockland	1	11765	Gross Alpha, Gross Beta, Radium-226, Radium-228, Uranium (Activity)
Suffolk	1	10528	Gross Alpha, Gross Beta, Tritium
Westchester	2	10806	Radon
		10108	Gross Alpha, Gross Beta, Tritium, Radon

Table 2. ELAP-Certified Commercial Laboratories for Potable Water Chemistry. Note that not all labs are certified for all tests. (<http://www.wadsworth.org/labcert/elap/comm.html>, retrieved 12/23/09).

General Region	Labs/Region	County	Labs/County	Lab ID#s
Central Upstate	32	Albany	3	10709, 11799, 10350
		Allegany	1	10760
		Broome	0	
		Cayuga	1	10081
		Chemung	0	
		Chenango	1	11591
		Cortland	1	10795
		Delaware	1	11919
		Greene	2	11771, 11907
		Madison	1	11405
		Oneida	1	10572
		Onondaga	5	11246, 11375, 10248, 10155, 10170
		Ontario	1	11369
		Orange	3	10673, 10142, 10510
		Otsego	1	11368
		Schenectady	1	11078
		Schoharie	0	
		Schuyler	0	
		Seneca	0	
		Steuben	2	11292, 11667
Sullivan	1	10794		
Tioga	1	10252		
Tompkins	2	11790, 11745		
Ulster	2	10824, 11546		
Yates	1	10517		
Western NY	12	Cattaraugus	0	
		Chautauqua	0	
		Erie	9	11660, 10247, 11606, 10436, 10475, 11862, 10234, 10026, 11179
		Genesee	0	
		Livingston	0	
		Monroe	3	10145, 11770, 10958
		Niagara	0	
		Orleans	0	
		Wayne	0	
		Wyoming	0	
Northern/ Eastern NY	10	Clinton	1	11892
		Columbia	0	
		Dutchess	1	10924

		Essex	0	
		Franklin	0	
		Fulton	1	10420
		Hamilton	0	
		Herkimer	0	
		Jefferson	1	10708
		Lewis	0	
		Montgomery	0	
		Oswego	0	
		Putnam	0	
		Rensselaer	0	
		St. Lawrence	2	10900, 11712
		Saratoga	1	11534
		Warren	3	10978, 11637, 10565
		Washington	0	
NYCity/ Long Island	29	Rockland	3	11713, 10328, 11765
		Westchester	5	11558, 10851, 10806, 10108, 10323
		Bronx	1	11617
		Kings	1	11671
		New York	5	10865, 11480, 10879, 11506, 11871
		Queens	1	11273
		Richmond	0	
		Nassau	7	11516, 10338, 11469, 10414, 11510, 10667, 10950
PA	6	Suffolk	6	11418, 10320, 10969, 11681, 10478, 11693
		N. Central	1	11216
		Northeast	1	11801
		Northwest	4	10336, 10552, 10121, 11880

### *Complaints*

Prior to issuing drilling permits and with regular review, the DEC should verify that county health departments have the capacity to manage data collection from private well water tests and to participate in related investigations. As stated above, DEC should work with DOH, county health departments, and testing labs to develop standardized reporting tools for the private well water testing program.

The dSGEIS states that well testing results will be shared between the DEC and county health departments. (Page 7-43). Neighboring county health departments, DOH, and DEC Division of Water should also have access to the data. The dSGEIS does not discuss whether test results will be made publicly available. The privacy of individual homeowners must be respected, but data should be made available to the public in aggregated forms. There should be a standard procedure for notifying surrounding well owners when a water quality problem is identified, particularly if it occurs after drilling activity. It should be clarified whether this is the responsibility of DOH, the county health department, or DEC.