SLIDES: Survey of State Sampling and Monitoring Rules

Kathryn Mutz
Josh Kruger

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Monitoring and Protecting Groundwater During Oil and Gas Development: Survey of State Sampling and Monitoring Rules

Natural Resources Law Center
Intermountain Oil and Gas BMP Project
Colorado Water and Energy Research Center

November 26, 2012

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Natural Resources Law Center
University of Colorado Law School
# State Regulations Require Sampling

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<thead>
<tr>
<th>State</th>
<th>Groundwater Sampling?</th>
<th>Agency</th>
<th>Summary of Groundwater Rules</th>
<th>Citation</th>
</tr>
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<tbody>
<tr>
<td>New York</td>
<td>Yes, in proposed revised draft SGEIS (The public comment period concluded on January 11, 2012)</td>
<td>New York State Department of Environmental Conservation (DEC)</td>
<td>Operators required (as a permit condition) to sample all water wells within 1,000 feet of the pad, subject to permission from property owner, or within 2,000 feet of pad if no wells are available for sampling within 1,000 feet either because there are none of record or because the property owner denies permission. Schedule: . Initial sampling and analysis prior to site disturbance at the first well on the pad, and prior to drilling commencement at additional wells on multi-well pads; . Sampling and analysis three months after reaching total measured depth (TMD) at any well on the pad if there is a hiatus of longer than three months between reaching TMD and any other milestone on the well pad that would require sampling and analysis; and . Sampling and analysis three months, six months and one year after hydraulic fracturing operations at each well on the pad.</td>
<td><a href="http://www.dec.ny.gov/docs/materials_minerals_pdf/rdsgeisch70911.pdf">http://www.dec.ny.gov/docs/materials_minerals_pdf/rdsgeisch70911.pdf</a></td>
</tr>
<tr>
<td>Ohio</td>
<td>Yes. SB 315</td>
<td>Ohio Department of Natural Resources</td>
<td>SB 315 expands pre-drilling water sampling requirements to 1,500 feet and applies this standard to both urban and rural areas. Previously, water wells were tested within 300 feet of oil and gas wells in urban areas. Water wells in rural areas were not tested previously. Does not appear to require any post-completion sampling.</td>
<td><a href="http://www.legislature.state.oh.us/bills.cfm?ID=129_SB_315">http://www.legislature.state.oh.us/bills.cfm?ID=129_SB_315</a></td>
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## State Regulations Create Rebuttable Presumption

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| Pennsylvania  | Rebuttable "zone of presumption" for water pollution. | Pennsylvania Department of Environmental Protection, Office of Oil and Gas Management | §22-6A-18: there is a rebuttable presumption that the drilling and the oil or gas well or either was the proximate cause of the contamination or deprivation of the fresh water source or supply within 1500 feet. Defenses (operator has burden of proving by preponderance of evidence):  
(1) The pollution existed prior to the drilling or alteration activity as determined by a predrilling or prealteration water well test.  
(2) The landowner or water purveyor refused to allow the operator access to the property to conduct a predrilling or prealteration water well test.  
(3) The water supply is not within one thousand five hundred feet of the well.  
(4) The pollution occurred more than six months after completion of drilling or alteration activities.  
(5) The pollution occurred as the result of some cause other than the drilling or alteration activity. | http://www.legis.state.wv.us/Bill_Status/bills_text.cfm?billdoc=hb401%20enr.htm&yr=2011&sessstype=4X&i=401 |
| West Virginia | Rebuttable presumption of operator liability if water is contaminated | WV Dep't of Environmental Protection | A well operator who affects a public or private water supply by pollution or diminution must restore or replace the affected water supply with an alternate source of water adequate in quality and quantity for the purposes served by the supply. This replaced or restored water supply must meet to the greater of pre-existing water quality standards or water quality standards established by the Pennsylvania Safe Drinking Water Act.  
(1) Act 13 increased the presumption of liability for water supply contamination for unconventional wells. Unless rebutted, the Act presumes that an operator is responsible for pollution of a water supply if the affected water supply is 2,500 feet from an unconventional well and that pollution occurred within 12 months of the later of completion, drilling, stimulation or alteration of the unconventional well.  
(2) Operators found to have impacted water supplies within the time and distance provisions of the presumption of liability must provide temporary potable water until the supplies are restored or replaced.  
(3) Unconventional well operators must provide written notice to landowners or water purveyors that the rebuttable presumption may be void if the landowner or water purveyor refuses the operator access to conduct a predrilling or pre-alteration survey. | http://files.dep.state.pa.us/OilGas/BOGM/BOGMPortalFiles/OilGasReports/2012/act13.pdf |
### State May Require Sampling

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| Alaska     | No. But statutory and regulatory authorization of groundwater sampling is strong. | Alaska Oil and Gas Conservation Commission | 20 AAC 25.534. Tests, surveys, and inspections  
(a) As the commission considers necessary or advisable to carry out the purposes of AS 31.05 (Alaska Oil and Gas Conservation Act) and this chapter, the commission will require that tests or surveys be made to determine the  
(4) risk of fluid movement into freshwater.  
(b) The commission will, in its discretion, exercise its statutory power to enter and conduct on-site investigations and inspections at reasonable times of facilities, equipment, practices, records, or operations for the purpose of ensuring compliance with the requirements of this chapter. | Alaska Oil and Conservation Act Title 31 Oil and Gas: http://www.legis.state.ak.us/basis/foioproxy.asp?url=http://wwwjnu01.legis.state.ak.us/cgi-bin/foiloisa.dll/statsx07/query=312E0512E030/doc/t13554 |
<p>| California | No. &quot;May require&quot; language. | State of California Department of Conservation, Division of Oil, Gas, &amp; Geothermal Resources | 3106(c): The supervisor may require an operator to implement a monitoring program, designed to detect releases to the soil and water, including both groundwater and surface water, for aboveground oil production tanks and facilities. | CALIFORNIA LAWS FOR CONSERVATION OF PETROLEUM &amp; GAS: ftp://ftp.consrv.ca.gov/pub/oil/laws/PRC01.pdf |</p>
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<td>North Dakota</td>
<td>Not required</td>
<td>North Dakota Industrial Commission, Department of Mineral Resources, Oil and Gas Division</td>
<td>38-11.1-06. Landowners within one-half mile of a gas well who can prove that their water quality or quantity has been affected can recover the cost of making such repairs, alterations, or construction that will ensure the delivery to the surface owner of that quality and quantity of water available to the surface owner prior to the commencement of drilling operations. Prima facie evidence of injury under this section may be established by a showing that the mineral developer's drilling operations penetrated or disrupted an aquifer in such a manner as to cause a diminution in water quality or quantity within the distance limits imposed by this section.</td>
<td><a href="https://www.dmr.nd.gov/oilgas/rules/rulebook.pdf">https://www.dmr.nd.gov/oilgas/rules/rulebook.pdf</a></td>
</tr>
<tr>
<td>Alabama</td>
<td>No. Vague &quot;special precautions&quot; provision.</td>
<td>State Oil and Gas Board of Alabama</td>
<td>400-2-4-.02. Protection of Freshwater Resources. An operator shall conduct all oil and gas operations in a manner so as to prevent the pollution of all freshwater resources. All fresh waters and waters of present or probable future value for domestic, municipal, commercial, stock, or agricultural purposes shall be confined to their respective strata and shall be adequately protected. Special precautions shall be taken to guard against any loss of artesian water from the strata in which it occurs, and the contamination of freshwater by objectionable water, oil, condensate, gas, or other deleterious substance to such fresh water.</td>
<td><a href="http://www.gsa.state.al.us/documents/misc_ogb/goldbook.pdf">http://www.gsa.state.al.us/documents/misc_ogb/goldbook.pdf</a></td>
</tr>
<tr>
<td>Arkansas</td>
<td>No</td>
<td>Arkansas Oil and Gas Commission</td>
<td>General Rules and Regulations: <a href="http://www.aogc.state.ar.us/OnlineData/Forms/Rules%20and%20Regulations.pdf">http://www.aogc.state.ar.us/OnlineData/Forms/Rules%20and%20Regulations.pdf</a></td>
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<tr>
<td>Texas</td>
<td>None found</td>
<td>Railroad Commission of Texas</td>
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<td>Louisiana</td>
<td>None found</td>
<td>Louisiana Department of Natural Resources</td>
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<tr>
<td>Oklahoma</td>
<td>None found</td>
<td>Oklahoma Corporation Commission</td>
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Intermountain Oil & Gas BMP Project

This and other documents discussed during the workshop can be found on the BMP Project website:

www.oilandgasbmpps.org/workshops/COGCCgroundwater/index.php
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http://www.oilandgasbmfps.org