



West Virginia
Surface Owners' Rights Organization

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April 28, 2010

Secretary Randy Huffman
West Virginia Department of Environmental Protection
Charleston, West Virginia

Re: Office of Oil and Gas (OO&G) Program Review

Dear Secretary Huffman,

Thank you for inviting the West Virginia Surface Owners' Rights Organization (WV-SORO) to participate in this process. While WV-SORO primarily advocates for its members as surface owners, 30% to 40% of our members also own their minerals. Therefore, our advocacy will be on behalf of both groups. (We would distinguish our mineral owners as small and medium sized land and mineral owners as opposed to those represented by the West Virginia Land and Mineral Owners Association who have to own 1,000 acres to be voting members of the organization.)

Your invitation indicated it would be beneficial to formulate our issues in writing to share with the group. This letter outlines several issues of concern to our organization. If our members send us others, we will update you.

Let us be clear. We expect you will be unable to deal with all of these issues at once, but with a thorough review and discussion amongst the interested parties you will at least be moving the process forward. We may risk being called unreasonable in listing so many issues, but we do so for four reasons. First, you asked. Second, we do not want someone to say later that they did not think we considered one of these issues an issue. We believe these are all issues. Third, if this letter becomes public or is reviewed by members of your agency who are not that familiar with the oil and gas regulatory program, it will be educational as to how far behind the State's oil and gas regulatory program has fallen compared to existing needs. Finally, there may be issues that we do not prioritize that you may decide you want to take on. We do not want to eliminate the possibility of you addressing an issue just because it is not one of our priorities.

Below is our list of issues that need addressed. We have added endnotes to refer to materials that support or elaborate upon our position.

Major issues primarily of interest to surface owners.

1. Notice to surface owners prior to entry onto land including copies of statutes and rules plus a New Mexico type negotiation process with incentives for the driller to participate in good faith. (We believe this will reduce the amount of time that state inspectors spend addressing permit comments made by surface owners that are really private property rights disputes between the surface and mineral owner.) We have specific language if you would like it to integrate the New Mexico type process with our existing permit notification process.
2. Improvements to the Surface Damage Compensation Act.
3. Increasing the minimum distance for wells from dwellings and water wells. Location of a well site edge should be no closer than 200 feet of buildings inhabited or used by humans. A greater distance would be even better due to potential hazards such as fire, explosion or spray, as well as potential health effects. Under Charleston zoning rules oil and gas wells must be at least 500 feet from any home, church, school, nursing home, hospital or sanitarium.

Major issues of interest to surface owners and community/environmental groups.

1. Water sources/withdrawals for large volume fracturing jobs.
2. Clearer construction guidelines should be developed for structurally sound pits and impoundments and requirements for lining need to be formulated. For example, the edges of liners for pits and impoundments should be anchored in earth-filled trenches to prevent slipping. Liner seams should be welded and pressure tested between welds.¹
3. All wastewater and flowback should be captured and disposed of off-site at proper treatment facilities or UIC sites. Fracture flowback and flowback-contaminated waste should not be land applied. It should be isolated from other liquid waste if land application is permitted. Alternatively, the General Permit should be revised to avoid problems that have occurred, such as those reported at the Berry Energy site in the Fernow Experimental Forest and others. For example, loads for chloride and metals should be considered and sampling criteria for testing of the liquid waste should be developed.²
4. Operators should disclose and provide information on the chemicals/products used in drilling and fracturing. In addition, operators should be encouraged to avoid using certain products and use those that are less toxic and have the least environmental impact. The toxicity of products used should figure into the overall waste disposal and management plan.³
5. Solid pit waste should be removed and landfilled rather than buried in unmarked sites. Alternatively, guidelines should be established for marking, encapsulation and cover.⁴
6. A waste tracking procedure for all waste leaving a drill site needs to be implemented to insure property disposal and protect industry from false claims of contamination.⁵
7. Water testing parameters should be expanded to include major ions (calcium, magnesium, sodium, potassium, carbonate, sulfate and chloride), as well as fracturing

- fluid additives, constituents of flowback and buried solid pit waste that may serve as indicators of water contamination (such as lead, arsenic, BTEX and methane).⁶
8. Water test results should automatically be placed in a public database so researchers can study long-term effects of well development in the region.⁷
 9. State road traffic issues and damage repair.
 10. Grossly inadequate number of inspectors.
 11. Inspector examining board has long-standing vacancy for surface owner representative.
 12. Inspector hiring and firing provisions are too slanted to industry.
 - a. Candidates must have 3 to 6 years experience in industry to apply.
 - b. They have permanent tenure after one year probation and can only be removed for physical or mental impairment, incompetency, neglect of duty, drunkenness, or malfeasance in office or other good cause.
 - c. Twenty industry members can petition to remove the Inspector.
 - d. Inspectors can only be removed by the Oil and Gas Inspectors Examining Board.
 - e. The Board is made of up two industry members, the head of the State Office of Oil and Gas, the head of the state Division of Water Resources, and one environmental/surface owner member.
 - f. The environmental/surface owner slot has been vacant for years and years so right now in inspector cannot be fired without industry consent.
 13. Electronic permitting and reporting should be adopted and permits, well completion reports, discharge monitoring reports, inspector's reports and incident reports should be available at the OOG website. At the very least incidents where pollution has affected the state's waters should be fully documented online.⁸
 14. Further guidelines should be developed for inspection and incident reports. For incident reports, photographs, maps and a written narrative should be the minimum requirement. Photographs should also be added to inspection reports.⁹
 15. The OO&G should have a web page that allows people to file a complaint and upload documenting photographs, etc. It should be clear that anonymous complaints are allowed and information on how to remain anonymous should be obvious. In addition to a website, when surface owners receive notice of a permit application they should receive detailed information on where and how to report violations.
 16. Fines and penalties have not been increased in many years.
 17. In addition to inspectors there is too limited funding for other aspects of the program.
 18. Require "abandoned" wells in areas that will be drained by horizontal drilling to be plugged by the responsible operator; require those for which there is no responsible operator to be plugged by the horizontal well driller; and for active wells, require a the recording of a pressure test of the annular space. The alternative to that would be to require horizontal wells to be cemented from the surface all the way up and down the way UIC wells are cemented, instead of allowing annular space outside the production tubing that is open to the unprotected earth that could be exposed to fracturing pressures if the uncemented casing breaks, which has happened once already.

Major issues of interest to surface owners, environmental groups and mineral owners.

1. An estimated 13,000 orphaned wells need plugged.
2. An estimated 6,000 played out "abandoned wells" that have "responsible operators" need plugged, but there is little if any enforcement.
3. Inadequate well bonds (\$12 per well for some operators) — lead to the problems pointed out in the previous two items.
4. State law allows wells to be "operated" for bonding purposes by an entity that has no interest in the income from the well, contributing to the problems in the preceding items.

Major issues of interest to all players.

1. Well spacing with royalty and working interest sharing for horizontal drilling -- and in particular requiring these wells to be placed on centralized pads.
2. Well spacing with royalty and working interest sharing for wells to other shale formations.
3. Well spacing with royalty and working interest sharing for all wells.
4. Conservation Commission and perhaps other board procedures need modernized to an Administrative Law Judge (ALJ) system in order to:
 - a. Have hearings and pre-hearing negotiating sessions conducted by people professionally trained in conducting hearings and mediations,
 - b. Reduce the time the Chief and Secretary have to sit in evidentiary and negotiating sessions, and
 - c. Use a system in which the parties pay for a contract ALJ in order to reduce the workload on the limited OOG staff and have flexibility for high and low demand periods.

A starting point for all of this might be the model act put together for by the Interstate Oil and Gas Compact Commission. This agency is the national center for this kind of work. They may already be doing advanced work based on the drilling of multiple horizontal wells from centralized pads.

Smaller issues primarily of interest to surface owners.

1. The Soil Erosion and Sediment Control Manual should be revised to conform to the provisions of the DEP NPDES manual. For example, clear guidelines on vegetation cover the year after reclamation need to be established. Clearer requirements for road construction and proper drainage need to be adopted to more adequately meet conditions and control sediment.¹⁰
2. The "Oil and Gas Reclamation Notice" (Form WW-72) informs the surface owner that "*Pursuant to West Virginia Code 22-7, notice is hereby given that the undersigned well operator is commencing the reclamation of the surface disturbance caused by well work required by West Virginia Code 22-6-30 on the tract of land as follows: ...*" It continues, "*Any claim for oil and gas production damage compensation from the undersigned must*

be made within 2 years of the publication of this notice.” This is totally inadequate notice to the surface owner (and it is the first and only notice they get) that they are entitled to damage compensation. It should direct the surface owner to a source for more information on how to claim compensation. At a minimum, it should contain a reference to an explanation and a copy of the Act on the OOG web site.

3. Require site dimensions and road dimensions (not just length) to be placed on reclamation plans/permit applications so surface owners can really understand what is about to happen on their property and comment appropriately.
4. Require location of pipelines be put on reclamation plans/permit applications so the first notice the surface owner has of the pipeline location is not when the bulldozer takes off into the woods.
5. Require surface owner consent/input on State waiver of road slope and other requirements of the Soil Erosion and Sediment Control Manual.
6. Require surface owner consent to daylighting.
7. Provide surface owner options for road types and re-vegetation types.
8. Require solid pit waste to be removed and landfilled (right now the driller is not even required to put a monument where it is buried). See above.
9. Prohibit use of moats, as opposed to dikes, with a rainwater drain around storage tanks.¹¹
10. Storage tanks in floodplains need to be properly anchored.
11. Trap doors on storage tanks should be locked for safety purposes.
12. Electrical grounding of steel tanks should be required to prevent explosion if struck by lightning.¹²
13. If tanks are in flood plains, require them to be secured so they will not wash downstream in a flood.
14. Require deeds to state whether the minerals are being conveyed and if not that the mineral owner retains rights to use the surface to explore for and develop the minerals.
15. Allow surface owners to receive notice if the minerals under them are sold at a tax sale so they can redeem the minerals to themselves or step into the shoes of the tax sale purchaser.

Please let me know if you have any questions or things you want to discuss regarding this list.

Sincerely,

/s/David McMahon (Intended as a signature.)

David McMahon, J.D.

¹ New Mexico’s regulations incorporate these pit specifications. See New Mexico. *Highlights of the "Pit Rule" -- 19.15.17 NMAC*. Santa Fe, NM: New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division.
http://www.emnrd.state.nm.us/ocd/documents/PitRuleHighlights_001.pdf.

² The Arkansas land application permit has many of the needed requirements. Arkansas Department of Environmental Quality. 2008. *Authorization to Land Apply Drilling Fluids Under the Provision of the Arkansas Water and Pollution Control Act* (Act 472 of 1949, as Amended, A.C.A. §8-4-101, et seq.), and

A.C.A. §8-1-201, et seq. http://www.adeq.state.ar.us/water/branch_permits/pdfs/00000-WG-LA.pdf

³ See British Columbia Oil and Gas Handbook, Chapter on Waste Management --

http://www.ogc.gov.bc.ca/documents/forms/operations/chapter10_oil&gas_handbook.pdf.

⁴ See Pennsylvania regulations -- <http://www.pacode.com/secure/data/025/chapter78/chap78toc.html> -- and Argonne National Laboratory waste management site --

<http://web.ead.anl.gov/dwm/techdesc/burial/index.cfm>.

⁵ This is a recommendation by STRONGER -- State Review of Oil and Natural Gas Environmental Regulations, Inc. 2003. *West Virginia Follow-Up and Supplemental Review*. n.p.: State Review of Oil and Natural Gas Environmental Regulations, Inc. <http://www.strongerinc.org/documents/WVFinal.pdf>

⁶ DEP data from flowback samples from a Marcellus well contained high concentrations of several constituents, not just iron and chloride. Information on chemicals and products used in natural gas operations is available through the Endocrine Disruption Exchange,

<http://www.endocrinedisruption.com/chemicals/introduction.php>. For information on testing for methane in water, see Griffiths, Mary. 2007. *Protecting Water, Producing Gas: Minimizing the Impact of Coalbed Methane and Other Natural Gas Production on Alberta's Groundwater*. Drayton Valley, Alberta: The Pembina Institute, Alberta Ecotrust, Walter & Duncan Gordon Foundation.

http://pubs.pembina.org/reports/Water_Gas_Apr07_Final.pdf. The Thyne paper cited below also discusses methane testing.

⁷ This has proven helpful in Garfield County, Colorado. See Geoffrey Thyne, 2008, *Review of Phase II Hydrogeologic Study*, Prepared for Garfield County. SBS LLC.

http://s3.amazonaws.com/propublica/assets/methane/thyne_review.pdf

In addition, Data should be reported to the operator and landowner by the Chief prior to drilling. In these reports, concentrations of analytes should be compared to USEPA drinking water standards, for those constituents for which such standards exist. These reports should also reference median concentrations of analytes measured in the WVDEP ambient groundwater program either statewide, for a reasonable radius (50 or 100 miles) around the well, or for the watershed in which the well is located. Such reporting would insure that inspectors and the Chief are using the water-quality data to look for impacts on water wells.

⁸ Here's an example of an oil and gas inspection report from Arkansas:

<http://www.adeq.state.ar.us/ftp/root/Pub/WebDatabases/InspectionsOnline/019472-insp.pdf>

⁹ See Arkansas inspection report sample in previous footnote.

¹⁰ In addition to DEP NPDES manual see industry created manual, see RAPPS ('Reasonable and Prudent Practices of Stabilization of Oil and Gas Construction Sites') guidance document, developed by oil and gas industry technical working group comprised of American Petroleum Institute members, independents, and trade association representatives, convened by API.

<http://www.api.org/aboutoilgas/sectors/explore/environmental-health.cfm>

¹¹ The *West Virginia Erosion and Sediment Control Field Manual* discourages but does not disallow use of moats.

¹² This is a recommendation by STRONGER -- State Review of Oil and Natural Gas Environmental Regulations, Inc. 2003. *West Virginia Follow-Up and Supplemental Review*. n.p.: State Review of Oil and Natural Gas Environmental Regulations, Inc. <http://www.strongerinc.org/documents/WVFinal.pdf>