



West Virginia's  
**Surface Owners' Rights Organization**

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**Comments upon  
WVDEP Industry Guidance  
Gas Well Drilling/Completion  
Large Water Volume [Marcellus Shale] Fracture Treatments.**

Thank you for this opportunity to comment upon this proposed "Guidance".

**General**

DEP, according to the Guidance, will require an additional addendum to a well permit "to provide a more thorough understanding of the proposed activity and better ensure protection of the environment." This seems to put the cart before the horse. This activity as it occurs with each well and in its totality should be understood before it is permitted. Progress in drilling techniques in the industry is usually incremental. But these new fracture techniques are a giant leap that were not contemplated by any of the statutes and rules governing oil and gas. The State should put large amounts of resources to do much more research and study before simply permitting this. There is too much risk to use the usual system of letting happen to see if bad things happen, and then do something about it, when long term damage may not be remediable.

The Guidance is actually Marcellus Shale drilling for beginners. Any driller who thought through responsible conduct of drilling would already be doing these things. If they are not already being done, then enforcement is what is needed.

It is not enough for there to be guidance. Guidance means things that relative responsible drillers under no particular cash flow or budgetary restraints should already be doing or would do if they thought about it. So maybe some who had not thought about it will do it now. But bad actors, and ordinary actors under cash flow or budgetary restraints, will ignore it. Guidance documents will, of course, be used when a surface owner claims in court that a driller is doing more than is fairly necessary. The driller will use the guidance document to defend their actions as having some form of approval from the State.

One need look no further than history, and current, problems with orphaned and abandoned wells to see that trusting the industry to be responsible does not work, particularly on bigger more expensive problems.

**Specifics**

## **Frac water contents:**

Trucks carrying frac water and additives are required to have Material Safety Data Sheets so that emergency workers will know what they are dealing with in the event of a wreck. So the information about what is in the frac water is known. But surface owners and members of the public have no practicable way to find these generally, and certainly not for a particular surface owner's well. The author of these documents has personally tried going to the web site where members of the industry have told me they can be located, but I have not been able to find them. An industry, and an agency, acting in good faith should make them practicably available. That should be an important part of the Guidance.

## **Water volume**

We understand that some drillers are finding that 600,000 gallons of water works as well as 1,000,000 gallons of water for vertical Marcellus Shale well fracs. This will take the volume below the existing reporting requirements. Something more is needed – another illustration of the inadequacy of mere guidance. And this reporting is post-withdrawal. We should know the plan of where the water is coming from.

## **“Flow”**

The Guidance suggests taking no more than 10% of a stream flow, and during low water periods drillers should seek larger stream sources. That % alone does not sound unreasonable on its face.

Many larger streams may appear full, but that is not “flow”. The difference should be clarified. The Corps of Engineers monitors and reports stream flow in many locations that should be part of the mix of determining stream flow.

If one driller takes 10%, and the next one down takes 10%, and the next one takes 10%, what is the bottom line that the stream flow is not “sustained”?

Drillers are not to withdraw more than the source can “sustain”. What does that mean? Sustain to some users and creatures may be different than others. It may have different meanings to municipal water treatment facilities, farm animals, wildlife, aquatic life etc. There should be scientific measures not generalities.

## **Truck Traffic**

The Guidance points out that there are safety concerns, but gives no guidance on a response. A few drillers have used convoy systems with pilot trucks etc. A few avoid high volume traffic times of day. A few avoid when school buses are running. These and other practices should be at least part of the Guidance, and requirements, for everyone.

## **Site Construction**

The size of sites for these wells was not in the contemplation of the creators of the current Soil Erosion and Sediment Control Field Manual of the Office of Oil and Gas. The Guidance recognizes this and points drillers to the Construction and Stormwater Manual. But drillers are currently exempt from this regulation. It is time for the OOG's Field Manual to be updated to reflect developing technology, instead of guiding drillers to regulation with which they do not have to comply.

## **Site Plans in Permits**

The drawings of sites and access roads in permit applications for wells using large water volume fracs are required by the new Guidance to be clear, concise and complete so that all parties understand the proposed activity. This is appreciated. But that should be the case in permit applications for all wells so surface owners can evaluate the drillers' planned soil erosion control, or have it evaluated. Most disturbing to surface owners is that inspectors from the Office of Oil and Gas can waive requirements of the existing manual without consent or input from surface owners.

## **“Flow back” vs. “Produced Fluids”**

The water used for fracing continues to come out of the well even after production is started. The Guidance appears silent on the issue of “flow back” vs. “produced fluids”. Fracs this large will have not only greater flow-backs but greater amounts of fluid produced during production. There should be guidance how all this water is to be treated.

## **Solids**

Treating flow-back to reuse to frac or re-frac is likely to result in solids settling out. If these solids are not disposed of by the general permit for disposal of drilling pit fluids (a method that surface owners already strongly protest), then what guidance is there for those solids? Burying of pit waste in pit liners in unmarked areas, is going to cause a problem some day when someone digs a foundation – or cannot.

## **Well Work Permit Application Addendum**

Co-equal with the concern about the use and disposal of the volume of water, is the concern for what is in the disposed water. Yet the draft application addendum does not ask what is going to be added to the frac water! That is an enormous shortcoming. If, as industry claims, these chemicals are benign, they have been foolish in not being out front about what is being used. The unknown is much more frightening to the public than the known. The conclusion the public reaches when the industry, and now the agency, is not forthright is that there must be dangerous stuff, or stuff at dangerous levels, being used. Not trusting the public leads to the public not being trusting. Industry efforts to get out in front of these have been dilatory and then meager. The DEP should get out in front of this issue by requiring disclosure, or it too will be perceived of, if not in fact, hiding danger from the public. The frac chemicals should be on this addendum!

## **UIC wells**

If this is the best disposal method and there are only two commercial disposal wells in West Virginia, what is DEP doing to promote the availability of these wells?

## **Karst geology**

Marcellus Shale wells are about to be drilled where there is Karst geology unlike that experienced by drillers in other parts of the state. This is precisely where a study should be done before permitting, not let the industry give it their best shot and see what happens.

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