

Summary
Joint CAC/CNRAC PM Session
July 28, 2010

Carl Carlson, Director of Government Affairs for Range Resources, and Bruce Snyder, Range's Senior Environmental Resource Specialist, gave a presentation on Range Resources, the drilling and completion of wells in the Marcellus Shale Play, and Range's position on various issues and activities such as its support for the new Chapter 78 regulations. Questions and discussion were wide ranging.

Range Resources is headquartered in Fort Worth, Texas, but has been in Pennsylvania (headquarters Washington County – south of Pittsburgh) over 26 years. They have been the leading gas producer for quite a few years, with about 5,000 conventional oil and gas wells prior to the first Marcellus well in late 2004. They have invested over \$1.5 billion in Pennsylvania to date. The company employs 300 folks in Pennsylvania and supports about four times that many full-time contractor jobs for these activities.

The Marcellus play could be the second largest gas field in the world. The drilling rig count in Pennsylvania has increased rapidly even though gas prices are down; the same is not true in West Virginia, due to the better tax climate in Pennsylvania.

He touched on taxation issues, and stated that any discussion of an extraction tax should include a discussion of a tax model that does not put investment in Pennsylvania's Marcellus Shale at a competitive disadvantage to other shale producing states, and modernizing out statutory and regulatory framework for gas development to improve the investment climate, provide predictable rules and protect the environment.

He stated that they want to be well regulated and that DEP has done a good job regulating the rapid increase in drilling activity. Range supports good, science-based regulation. Pennsylvania's oil and gas casing and cementing regulations are among the toughest in the country.

He also touched on "fair pooling" (aka forced pooling). Pennsylvania already has a 1961 statute on the books that deals with pooling, but the current law does not pertain to horizontal drilling or the Marcellus formation.

He stated that there are zero documented cases of groundwater contamination in over 1 million wells fraced over the last 60 years.

Questions and Answers:

Do you have any aerial pictures showing the impact of pipelines and gathering lines on the landscape? No, the issue needs to be looked at and policies developed. Some companies try to keep pipelines running along the road to minimize additional impacts.

How long before you are able to do the reclamation from the time you drill the well? On a pad of 10 wells, the whole process from building the site, drilling all the wells, fracing, getting them to

production, and replanting, could take a year to one and one-half years. Other times, the range can be five, ten, to 50 years. The sites are being designed so that they can use the same site, same pipe, same access roads over again, rather than create more disturbance.

When a site is ready for replanting, what types of vegetation is planted and who determines what that will be? Under the Erosion Control Regulation, the site has to be stabilized so there is no runoff. This requires some kind of herbaceous cover of grass, clover, etc. After so many years, some sites can revert to forest. The company works with the landowners to determine what to plant on commonwealth lands, the state will determine what will be planted. Reclaiming drilling sites may be an opportunity to plant American Chestnut hybrids.

If there is a development of a different shale that is above or below the Marcellus Shale, are you going to use the same well pad? Can you use the same hole? Even in just the Marcellus Shale, if the company drills a pad of 10 wells, they are all separate vertical holes.

The American Chestnut Foundation at Penn State is close to developing seedlings to plant to reintroduce chestnuts to Pennsylvania that would be 98% American Chestnut but bug resistant. Is this an opportunity to help disseminate chestnuts throughout the state? Yes. There is potential for this. The chestnut is a larger tree, but there are places along the side of a road or other openings where it can be planted.

How do you protect reclaimed/revegetated areas from wildlife until it gets established? It is protected with chain-link fencing and netting.

Range Resources has the best or close to the best compliance record, as far as violations. What is that attributed to and is that transferable to other companies? Most of the companies involved in this are relatively large companies. Range was first and has been at it longer. They have learned from their missteps along the way. There is still a lot of learning to be done yet. There are workgroups working with DEP on best management practices on different aspects of development, studying reports on accidents to determine how to do it better, etc.

Are you aware of health impacts from the fracing process, i.e., chemicals in landowners' drinking water? Some chemicals have impacts at very low thresholds. Regulations require that all hazardous chemicals be disclosed and on labels and paperwork. This information is disclosed on their website and fracing chemicals are not posted on DEP's website.

Can you comment on the direction you anticipate forced pooling to take? It is felt that constitutional rights are getting tramped on. In some circumstances it is forcing someone who didn't voluntarily lease their rights to do so. The alternative is to work around them, and possibly leave them in a position where they can never be developed. It is a tradeoff between the environment, resource recovery, and the ability of a holdout that may randomly impact a lot of the other landowners.

Can the company drill laterals without getting under the landowners property illegally? Yes, they can legally drill along the property line.

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Andrew Heath, Executive Director of Renew Growing Greener, a statewide coalition of 23 conservation, recreation, and environmental organizations, gave a presentation on efforts to renew Pennsylvania's Growing Greener program and establishment of a dedicated and sustainable source of revenue to support this renewal.

Growing Greener began in 1999; we are now facing the depletion of funding of a proven and successful program.

Unless our elected officials act very soon, Growing Greener funds will be practically depleted in just over one year. In 2007-2008 there was \$200 million in available funding. There will be as little as \$15 million in funding in 2011.

The coalition has been together for two years to set a path because they understood that this time was coming. Their purpose was to ensure that Pennsylvania's conservation legacy would continue to move forward.

The coalition's needs assessment identified a need for \$600 million annually which they recognized as unrealistic. Instead, the coalition is striving to identify funding sources to raise \$200 million annually. There is no magic bullet or single source of revenue that will generate the needed \$200 million annually. The coalition has been meeting with candidates, legislators, etc., to educate them about the need for Growing Greener, and on using a significant portion of the severance tax as one logical funding source for Growing Greener.

There is an on-line data base to see what projects were funded. In addition, a legislative budget and Finance Committee report on Growing Greener II shows that in just the past four years Growing Greener helped to protect more than 33,000 acres of farm land, has conserved more than 42,000 acres of open space, improved recreation to 234 community park projects, restored more than 1,600 acres of abandoned mines, and helped to reduce flooding and pollution of our waters through the 400 watershed protection projects.

He distributed copies of a statement of support that organizations can sign onto. This further empowers the coalition in its efforts.

Questions and Answers

How is the coalition funded? The coalition members are financially invested into the campaign. It also receives foundation money and will soon be implementing an aggressive fundraising campaign. They clearly separate funding and outreach for advocacy and education.

For information and education website (no advocacy and funded through foundations) is www.growinggreener.info .

The campaign coalition site (funded separately) is www.renewgrowinggreener.org . This site is still under development.

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Scott Perry is the Director of the Bureau of Oil and Gas Management. He updated both councils on Marcellus emergencies.

So far this year DEP has received 1,800 Marcellus permit applications. They are on pace and are expecting about 3,500 applications for the whole year.

EOG

At the EOG site, the operators were cleaning out the well after hydraulic fracturing. During the post hydraulic fracturing activity is when they lost control of the well. They lost control primarily through operator error – there were not enough of barriers (mechanical devices at key pressure points) in place. The operator considered the “stripper rubber” (rubber around the pipe that goes up and down in the well bore) as a barrier, but as soon as the stripper rubber is being used it starts to degrade.

The incident happened at 6:45 a.m. and it wasn’t until four hours later, around 10:50 when 911 was called. Once regulators got on site, approximately 35,000 gallons of flow back was collected. A specialty team from Houston, Texas, was flown to the site and ultimately got the well back under control.

DEP fined both EOG and their subcontractor, holding them both accountable. In addition, DEP’s investigation resulted in several specific requirements of operators.

- All operators must develop a barrier policy
- Reiteration of requirements that are in DEP’s regulations, e.g., there must be a certified person present at the well site. Well-control specialists must receive appropriate training from an accredited body to receive that certification.
- Test the blowout preventer prior to putting it into service, not after putting the well head under pressure.
- Mandating everyone to maintain the PPC plan on each well site. Every operator is being given a list of emergency contact numbers, starting with the inspector working in the area, the program manager, the DEP after-hours hotline, and of course 911.

DEP regulations require operators to develop a “Prevention, Preparedness and Contingency Plan” that describes the procedures the operator will follow in the event of a spill or an emergency. This document also contains emergency contact number. Our regulations require operators to notify us immediately if there is a spill that threatens water or can damage property.

Huntley and Huntley

Still investigating, but appears that they didn’t properly evacuate the tank prior to welding. A specialty team from Houston, Texas, was flown to the site to assist.

As a result of these two incidents, it is apparent that there is a lack of such specialty companies and trained first responders in Pennsylvania. DEP is looking at ways to get more training for local first responders.

Questions and Answers

Does DEP have sufficient expertise or does it all lay with the industry? DEP doesn't have well control specialists, and events are sporadic so it doesn't make sense to develop it inside of DEP. However, we need to have it in state at some level to speed responsiveness.

Are many of the subcontractors working on well drilling from Pennsylvania? Many are from Pennsylvania, but much of the specialty work is from out of state. A number of schools are ramping up training for the higher level jobs.

Do we have a hierarchy of knowledge and authority to avoid something like the disaster in the Gulf? We are developing that expertise, and right now, all DEP inspectors have a minimum of five years of experience, and all have the authority to shut an operation down if they feel it is needed.