

**Minutes of the Oil and Gas Technical Advisory Board Meeting
Rachel Carson State Office Building
Harrisburg, PA
September 17, 2009
10:00 A.M.**

A meeting of the Oil and Gas Technical Advisory Board (TAB) was held on September 17, 2009 in Room 105 of the Rachel Carson State Office Building, Harrisburg. TAB members present were Chairman Robert Watson, Gary Slagel, and Burt Waite. Ron Gilius, Dave English, Eugene Pine, Susan Ghoweri, Carol Daniels, Scott Perry, Scott Roberts, Craig Lobins, Alan Eichler and Jennifer Means attended from DEP. Also attending were Nathan Bennett, Amy Randolph and Ted Borawski (DCNR-Forestry), Mary Anna Babich (EQT), Matt Landis (WSL), Alexander Becker (Widener Law), Andrew Strassner (Tetra Tech), Carla Suszkowski (Range Resources), Megan Hollinger (Malady & Wooten Public Affairs), Steve Rhoades (POGAM) and Terry Black (ERM).

Agenda Item 1 – Introduction and Opening Remarks

The meeting was called to order by Chairman Watson at 10:00 a.m. and was followed by introductions.

Agenda Item 2 – Approval of Draft Minutes from May 28, 2009

The motion to approve the minutes from the last Technical Advisory Board (TAB) meeting was made by Gary Slagel, second by Burt Waite. Minutes were approved.

Agenda Item 3 – General Program Update

Ron Gilius opened by briefly reviewing permitting statistics from the Weekly Workload Report for the Week of 9/7/2009 to 9/11/2009. He stated that the Bureau had received 4,346 Well Permit applications year to date. That total includes 1,230 Marcellus Shale applications which far exceeds the 700 previously projected even in this period of economic downturn. Ron also mentioned that the 3,166 Non-Marcellus well applications are down quite significantly than originally projected. This information is posted weekly on the Oil and Gas Website.

Ron continued by giving an update on staffing. The staffing process to fill 37 new positions began back in the beginning of the year and was done in three phases. Currently we are under phase three and all but about five or six of the new positions are filled.

The next update was on the Total Dissolved Solids (TDS) strategy in which the Water Quality Program is involved. Ron told the committee at the August Environmental Quality Board (EQB) meeting, the board accepted the revisions to Chapter 95 as proposed rulemaking. Currently, it is going through the legal review process and the PA Bulletin. It is expected to be out for public comment in November. Ron continued by saying the Water Resources Advisory Committee (WRAC) has established a subgroup to further explore the TDS issues. This group is scheduled to meet on September 22.

Gary Slagel told the board that he chairs the Water Sub Committee and the Marcellus Shale Committee. In that capacity, he is trying to coordinate the issues and concerns the Marcellus Shale Industry has with the proposed Chapter 95 regulations. These concerns still remain significant, irrespective of the passage of time, and the concerns have been clearly enumerated to the Department of Environmental Protection (DEP) in comment letters that were submitted to Water Management Deputy Secretary Hines with regard to pre-publication draft of that regulation.

The concerns go toward the cost benefit of moving forward with this, as well as with the fundamental need to address TDS. Concerns lie on whether the technology is ready at a reasonable cost and if it can be implemented within the timeline on the basis which the regulations seem to be calling. Gary continued by saying they plan to keep working with the industry and explore our options not only with the Marcellus Shale Committee but with Pennsylvania Oil and Gas Association (POGAM) and the Independent Oil and Gas Association (IOGA) to try to understand what the motivation is for the inability of the Department to slow down the process and look at some of the issues we have raised, as well as get DEP to understand where our concerns are and get them to be more responsive to these concerns.

Burt Waite added that this TDS strategy is really far reaching and goes far beyond Oil and Gas, although Oil and Gas is going to be touched very directly by this strategy. Burt added that he knows that WRAC is addressing this and raised this as an issue at a Citizens Advisory Council. Other groups, such as the PA Coal Association, POGAM and the Marcellus Shale Committee are all looking at this to offer comments but it would seem appropriate for the Oil and Gas TAB Committee to also offer comments on this strategy as well.

Burt volunteered Gary Slagel and himself to draft a comment from the Oil and Gas TAB and bring it the next board meeting for consideration. Upon agreement of the board, it can then be submitted to the Department. Chairman Watson agreed this would be a good idea. Chairman Watson asked Burt what he envisioned other than the documentation of this letter and if the letter was to be technical in nature. Burt responded that as an Advisory Board, we can only really advise, and on this particular issue the feelings are running high and there is a great deal of concern, therefore, he would like to articulate those concerns from the board to the department. He felt this was a very technical issue and was an appropriate subject to be addressed by the board.

Steve Rhoads expressed his concerns regarding many issues on this subject and discussion ensued.

Ron continued to inform the board that there are a lot of things happening on the Marcellus Shale on a grander scale. Some of these things are in the technical publications that are coming out as well as some of the conferences that are being scheduled here in Pennsylvania. Ron said the Department of Energy (DOE) released a Primer on Shale Gas Development which is something they funded with the intent of providing good literature to the public sector on how shale gas is being developed. This information is available on the Bureau of Oil & Gas (BOGM) website.

Ron informed the committee that the Ground Water Protection Council (GWPC) came out with a publication that has some guidelines on what should be addressed for wells that are doing hydraulic fracturing. This information is also available on BOGM's website.

Ron also mentioned the POGAM sponsored Conference which was held in Erie as well as the November 16 -17 PA Natural Gas Summit co-partnered by Penn State University and IOGCC. The first part of the summit will deal mostly with all issues related to Marcellus Shale development and the second part concentrating on infrastructure needs in Pennsylvania and throughout the Appalachian Basin.

Agenda Item 4 – Implementation of New Well Permit application Fees for Non-Marcellus Shale Wells

David English told the committee that the implementation of the next waiver on the permit fee increases was approved final at the last EQB meeting. It is currently being discussed by the Pennsylvania Independent Regulatory Review Commission (IRRC) and is expected to pass and receive the final in approximately a month, which is when the new fees will go into effect. Dave said everything is ready to go and it is just a matter of publication to make everyone aware of the increase, getting the new forms out and use of the new fee calculator.

Dave presented slides to the committee showing various charts which included Well Permits Received by Year 1998-2009, Monthly Permits received and figures/spreadsheet submitted to IRRC showing both initial and new projections for both Marcellus and traditional wells. Ron added the initial figures were based on pre-economic slump conditions. Steve Rhoades questioned the number of wells projected. Craig Lobins added since 2003 the Northwest Regional Office had been on a 25% annual increase until last year. Steve also mentioned the interest in the Marcellus Shale Wells is significant. Chairman Watson mentioned the rig count is increasing in PA while decreasing in other states.

Discussion continued on well projections versus oil prices and the impact in the upcoming years for both shale wells and traditional wells.

Agenda Item 5 – Discussion of Regulatory Revisions for 25 Pa. Code Chapter 78

- a. Casing and Cementing, Testing, Lost Circulation, Casing Standards, BOP's**
- b. Stray Gas Mitigation Response**
- c. Water Supply Replacement**
- d. Operator's Well Integrity Report for Existing Wells**

J. Scott Roberts, Deputy Secretary of Mineral Resource Management, opened this portion of the meeting by showing his appreciation to the staff of the Bureau of Oil and Gas Management in getting this huge task completed (for the TAB meeting) regarding the proposed Regulatory Revisions in the time frame allowed. He felt the Bureau has done an exceptional job in getting it completed while under a great deal of duress in most cases.

Scott proceeded to inform the committee that one of the issues that keeps occurring is stray gas migration problems. He continued by saying he is here today to try to set up what he considers to be a collaborative effort with the industry to establish how you go about dealing with controlling gas inside water and gas wells. There have been some very high profile cases involving stray gas that have taken place in PA over the past ten years. It is an issue we need to address but it is not an issue solely for the gas industry. The stories that come out about these incidents sometimes do not explain or do justice to exactly where the problem lies. The DEP investigates a lot of cases where people in their homes or in their communities are finding stray and natural gas, which of course, can be a very hazardous condition.

Scott continued by stating what sometimes is underappreciated is the fact that there are multiple potential causes for that to happen. We have investigated some instances where it is literally sewer gas coming up from malfunctioning septic systems, as well as some cases that turned out to be pipeline issues. We also recognize and accept the fact that a lot of those incidents are from long term abandoned/orphan wells and are not trying to give the modern industry the burden to have to deal with those problems. The industry is charged a surcharge on the fees that they pay for wells. Those fees go into a fund for the Bureau of Oil and Gas Management/Regional Offices to use when plugging these wells. The Commonwealth recognizes and appreciates the help we get in the funding and we actually know the industry participates in other ways, as does the mining industry, in plugging these wells. These efforts are appreciated and we are not trying to have the modern industry deal with this historic problem. However, we do have issues where modern day wells, either during construction or during operation, have gas escaping from that wellbore and entering into the surrounding systems into the ground water as well as directly from hydrofracing into the atmosphere.

Scott continued by stressing that the department believes it is prudent public policy for the department to deal with this problem. First, these are hazardous situations that if go unaddressed can sometimes present potential fatal consequences. Secondly, when the company encounters one of these wells, he feels they discover by preventing the problem from occurring in the first place probably would have been far better for their company then letting it happen and dealing with the problem later.

Scott continued by requesting ideas from TAB on the regulatory revisions it believes necessary to accomplish the public policy goal of preventing stray gas migrations from modern wells. We are looking for direction on what is technical achievable, real world practical and something that people can achieve to prevent these gas migration problems.

DEP Secretary Hanger has laid out an aggressive schedule for us to try to work through and this schedule is of some concern to both the chair and members of the industry. By the same token, our job is to try to accomplish what the Secretary lays out for us and to do our best to meet that schedule. What the Bureau is asking for is the Board to join us in recognizing this is an issue and needs to be dealt with, as well as work with us to try to accomplish sound technical and achievable regulations that lays out how the modern industry in PA will prevent these cases from happening and recognizing we are dealing with geologic systems and human lives. We are asking the board to help us sort through what we believe is going to be a fair amount of comments coming into us on this issue.

Secretary Roberts continued by pointing out two areas. The first area is the proposed regulations contain a number of issues dealing with water supplies. Part of the genius is the provisions for water supply protection in the Oil and Gas Act which are very similar in a lot of respects to water regulations in other environmental statutes that the Commonwealth enforces. Those other statutes have been the subject of a lot of case laws in how to interpret those statutes. So a lot of what you see in these proposed regulations is born from those experiences in how the courts view those laws.

The second area is when faced with a situation where we have stray gas, the first steps are to make sure that nothing really bad happens and to stabilize the situation. Once the situation is stabilized, we can step back and determine what really happened with what wells.

Upon completion of Deputy Secretary Robert's opening remarks, Gene Pine reviewed the proposed Regulatory Revisions for (a) Casing and Cementing, Testing, Lost Circulation, Casing Standards, BOP's and (d) Operator's Well Integrity Report for Existing Wells.

Ron Gilius reviewed the proposed Regulatory Revisions for (b) Stray Gas Mitigation Response and (c) Water Supply Replacement.

Agenda Item 6 – Well Plugging – Locating Plugs across the Formation, Plugging Horizontal Boreholes

Gene Pine also reviewed the proposed Regulatory Revisions for this Agenda Item.

Agenda Item 7 – Update of Proposed Risk Based Data Management System (RBDMS) Data Base for managing Oil and Gas Well Data

As was discussed at prior TAB meetings, David English told the committee the Bureau of Oil and Gas Program is looking at implementing the RBDMS system that a lot of other Oil & Gas producing states are now using. We have a commitment from DEP and the Office of Administration to complete a needs assessment to evaluate if and how to implement this system. A four day meeting was held several weeks ago between our Information Technology and Regional Staff with the Ground Water Protection Council (GWPC) and RBDMS to review our business processes and what parts of the RBDMS can be picked up initially along with how to coordinate data exchange with eFACTS and RBDMS which is specific for the Oil and Gas Program. This meeting was held to review processes and insure regional needs are met as well.

Chairman Watson asked why change our current system and Dave explained that right now there is a lot of oil and gas information the "new" operators are expecting to see and we currently do not capture this information in eFACTS. Examples Dave gave where the structure is already built in RBDMS but not captured in eFACTS, were bottom hole, casing/cement and mining data.

DEP's commitment is to have Permitting (application processing and inventory) up and running is about 12 to 15 months. There is also a Hydro fracturing Module to be developed with about \$1 million funded by the Department of Energy (DOE) and the GWPC to evaluate fracturing in

Shale Formations. Pennsylvania has been identified as the lead project for the Hydro fracturing module to be developed as part of RBDMS. The project time frame is two years.

Agenda Item 8 – Date for next Technical Advisory Board meeting (October timeframe)

Since two members of the Board were not present, a conference call will be set to write a letter to the Secretary explaining the need for a time extension and organizing subcommittees to address the technical aspects of the draft regulations. (Note: The conference call was held on September 23. A letter was developed and sent to the Secretary on October 1. The date for the next TAB meeting was set for October 28.)

Agenda Item 10. Comments from the public

Comments from the public were addressed during the discussion of the various agenda items.

Gary Slagel motioned the meeting be adjourned. The motion was second by Burt Waite and the meeting adjourned at 12:50 pm.