

Minutes of the Oil and Gas Technical Advisory Board Meeting
Rachel Carson State Office Building
Harrisburg, PA
October 28, 2009
10:00 A.M.

A meeting of the Oil and Gas Technical Advisory Board (TAB) was held on October 28, 2009 in Room 105 of the Rachel Carson State Office Building, Harrisburg. TAB members present were Chairman Robert Watson, Gary Slagel, Burt Waite, Art Yingling and Sam Fragale. Ron Gilius, Dave English, Eugene Pine, Susan Ghoweri, Craig Lobins, Alan Eichler, Scott Perry, John Stefanko and Carol Daniels attended from DEP. Also attending were Kevin Coleman (Marathon Oil Co.), Pat Kellan (Superior Well Services), Larry Sanders (Exco North Coast), Mary Anna Babich (EQT Production), Megan Hollinger (Malady & Wooten Public Affairs), Steve Rhoades (POGAM), Charity Fleenor (Penn Virginia Oil & Gas), Carla Suszkowski (Range Resources), Eric Battisti (BIPC), Joe Deklinski (PA House of Representatives), Amy Randolph (DCNR), Terry Black (ERM), Ken Warren (Northeast Energy), Teresa Copenhaver (Triad Strategies) and Patrick Henderson (Senate GOP).

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 September 17, 2009

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

Agenda Item 3 – General Update

Chairman Watson opened this portion of the meeting by reviewing the letter TAB received from Secretary Hanger dated October 23, 2009. Ron Gilius explained to everyone how we got to the meeting today and what had occurred at the prior meetings. Ron stated since the Marcellus Shale started to be developed, we have been talking at the TAB meetings about integrity issues with the wells. This eventually led up to a presentation of the regulation package to the TAB members at the September 17 TAB meeting. This package is centered on two primary issues with one being well integrity issues the second major theme being gas migration issues.

Ron continued by saying at the TAB meeting held last month we went through the regulations and it was more of a briefing due to not having a full quorum of members. It was at this meeting that TAB recommended going into subcommittees to address many of the technical issues. On a follow up conference call the TAB members reconvened, drafted a letter and mailed it to the Secretary with a recommendation of developing three subcommittees and the need for a six-month time frame before responding back to the Department.

As a follow up, the Department and the Secretary have a very strong desire to move the regulation package through as expeditiously as possible. The original goal was to have these regulations introduced at the December Environmental Quality Board (EQB) meeting, but technical issues

pushed this past their scheduled meeting. This meeting is to review the next draft of the regulations on technical issues, to find where there is agreement and see what technical issues need to be addressed. The goal is to move these regulations through as quickly as possible, but redefine something that is technically accurate prior to going out for public comment.

At Chairman Watson's request, Ron reviewed the document titled "Stray Natural Gas Migration Associated with Oil and Gas Wells Report" developed by BOGM. This report indicates, due to the number of gas wells drilled in the Commonwealth since the inception of the industry, that potential exists for natural gas to migrate from the well bore (via either improperly constructed or old, deteriorated wells) and adversely affect water supplies, as well as accumulate within or adjacent to structures such as residences and businesses. Collectively, this may represent a threat to public health, safety and welfare, and is also a potential threat of fire or explosion. Dr. Watson complimented the DEP effort on developing the report.

The report documents that it should also be noted the Department receives complaints of stray gas from other sources, such as methane gas due to microbial processes, or caused by burial of organic matter, landfills, mining activity, transmission or distribution pipeline, or natural causes.

The Department has documented such occurrences and these cases are provided in this document. It includes the cases that were readily available. The inventory of oil and gas well stray gas cases include: new wells stray gas migration cases; operating wells stray gas migration cases; legacy or abandoned well cases and underground storage of natural gas cases. Chairman Watson complimented the regions on a well constructed document. He indicated it was helpful to the TAB members and the industry to be able to put everything into context. Discussion ensued on this report.

Gary Slagel continued the meeting by reviewing a letter he and Burt Waite had prepared summarizing TAB's concerns about the total dissolved solids (TDS) proposed rulemaking being developed by the Department.

Ron Gilius asked if TAB could recommend changes in the well drilling and completion process that would address the minimizing the generation of the wastewaters and add to the debate of how this could be handled. Gary responded that the general direction, at least for the Marcellus Shale producers, is to minimize the amount of waste water that ultimately has to be disposed.

Gary continued by stating that if you have enough wells in a large enough area you could look at the use and recycle, but if you are not in that situation you have waste water disposal issues to address. Burt Waite added a big part of the issue here in PA is the available technology. Most of the conventional operators use a treatment option either through commercial facilities or other Public Owned Treatment Works (POTW's). This TDS strategy will at some point eliminate this even though the existing commercial facilities will be grandfathered as soon as there is a change in their permit condition, but they will be limited on how much fluid they can accept. This serves, at the very least, a cap on the on the amount of water they can dispose right now and that amount will soon be reduced without a viable option in place to take up that slack. This is aimed more at conventional wells as opposed to Marcellus wells.

Chairman Watson asked Gary about the status of the Marcellus Shale Committee's investigation into the potential development of subsurface discharge wells. Gary responded some company's are actively pursuing that issues and depending on who you talk to, some people feel their may be a

geologic formation that can accept a significant amount of waste water to make it an viable disposal option, while others feel that it has yet to be demonstrated.

Ron Gilius said the current proposed rulemaking for the Chapter 95 TDS issues is going through the Water Resources Advisory Committee (WRAC) for commenting and there is a special subcommittee in place. Ron mentioned he did not see any problems in drafting a letter expressing TAB's concerns as opposed to having one advisory group interjecting on another advisory group.

At this time Gary Slagel motioned to make the letter dated October 28, 2009 be made a part of TAB Committee's permanent record. Burt Waite seconded the motion. All approved.

Agenda Item 4 –Discussion of Regulatory Revisions for 25 PA. Code Chapter 78.

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

Art Yingling opened the discussing by referencing the TAB letter to the Secretary and stating that TAB fully supports the Department's efforts to prevent and manage the threat that stray gas migration presents to drinking water supplies and public safety. However, the Board has concerns with respect to some of the language in the proposed regulations. At this point TAB fully supports the idea of reviewing the proposal and bringing it up to the point where it is technically sound that can go before the EQB for public comment. There are many issues to be discussed and it will take some time and discussion. Art recommending using the subcommittee approach used in 1984 when the regulations were first developed. These technical subcommittees will be addressing TAB's concerns and are intended to clarify what DEP, as well as what the industry, needs to move forward in this process.

Sam Fragale said that there are approximately 15 people who are interested in participating in the subcommittee to come up with technical recommendations. Sam added he would like to utilize this experience and expertise. Sam also expressed concern about revisions in the draft regulations made from the previous meeting to this meeting.

Ron Gilius explained that putting together a set of proposed regulations to submit to the Environmental Board (EB) is a dynamic process which involves many discussions and meetings. We use our staff, our regional staffs, people from other states as well as different practices companies use. The initial draft which was submitted at the last meeting was what we had on paper at that time. Based on the further discussions draft for today's meeting was developed. This is a limited package which is focusing on the general subjects of stray gas migration and well integrity, and water supply replacement. There are other subjects that need to be addressed in another set of regulations that will come in the future. In terms of rulemakings this year, the fee schedule has been completed and we are now working on the stray gas and well integrity issues with a follow-up package yet to be named. Ron added, in terms of what to look at now, it should be what you have in front of you today.

Chairman Watson asked if the Department would be changing the drafts the subcommittees would be reviewing over the next few months? Ron said that he would anticipate some changes on the four areas listed under Agenda Item No. 4.

Chairman Watson added if Bureau of Oil and Gas Management would like to have someone included in the deliberations by the subcommittee's discussion and asked who that person would be. Ron suggested that we can the subcommittee on the proposal and then assign one of our regional staff to sit down and answer any further questions. We do not plan on dictating the discussions, however we will show up, make the briefing and state the reasons, so the committee can follow up with their discussions.

Sam continued to express his concerns about the need to get industry's comments before making a TAB recommendation. Input would be needed on basically all the subjects listed under Agenda Item 4.

According to the By-Laws of the Technical Advisory Board, the Department consults with TAB for advice on technical matters. TAB has the right to establish subcommittees to get the proper advice. During the EQB rulemaking process, comment is solicited from the public and the industry across the board. TAB is not being asked to solicit comments from industry on the regulation package. Technical comment is being requested on these sub-sections. Ron emphasized that we need to stay within bounds and realize it is not a total solicitation to industry for all comments. Ron then asked if we can narrow it down to what the problem areas are or where the area needs more detail.

Prior to discussion of these subjects, Chairman Watson suggested a resolution be made to make the Resolution on Draft Chapter 78 Regulations become part of the permanent records. Gary Slagel made the motion, with a second from Sam Fragale. The Resolution was approved.

Scott Perry continued the meeting by reviewing the Water Supply Regulations under Subchapter C Environmental Protection Performance Standards. He addressed Art's comments on the use certain terms included in these provisions. He explained that the language is providing greater compared to that in the existing regulations and consistent with Environmental Hearing Board (EHB) rulings involving surface mining and now underground mining. Scott read the language of the Mining Statue and why it is appropriate to apply them to Oil and Gas. Lengthy discussion on various cases, process differences, litigation, editorial changes and applicable language on various paragraphs under Subchapter C ensued.

Chairman Watson recommended since we have a fairly expansive agenda, one strategy that may work would be to discuss one or two of these items today, and perhaps meet again and discuss the remaining items later. He also suggested we wait until we get a response from the subcommittee.

Sam Fragale asked based on some of the discussion today, if the Department was going to go back and prepare another draft before we have the meeting for providing additional comments. Ron said we that the typos would be addressed at a minimum. Scott recommended providing documents that show the changes that were made in both clean and marked up copies.

At this point, it was decided obviously all the sections to the proposed regulations could not be covered; however, TAB did have questions on various sections throughout the proposed draft. Lengthy discussion on several subjects and sections were reviewed by mixing sections and overlapping subchapters and paragraphs.

After reviewing the numerous issues, Burt Wait suggested more time would be needed judging by the number of issues already addressed at this meeting. Sam said that it would not necessary for someone from the Department to attend the subcommittee meeting to provide a briefing..

For the record of the TAB actions, the By-Laws state we need a name for the subcommittee and a list of the members. The name given to the subcommittee was “Chapter 78 Subcommittee” and Art said a list of the subcommittee’s members will be emailed to Carol Daniels at a later date. Art said he recalled six months were asked as a time frame and many meetings will be needed to accomplish this mission.

John Stefanko mentioned if there is anything the Department can do, even though it is not required, to let us know.

Chairman Watson asked if it was required for a copy of the subcommittee’s minutes or just come back to TAB. Ron said they have an obligation to report the comments back to TAB and TAB will act on their recommendations. This is consistent with the transparent process under which TAB operates.

Agenda Item 5. Well Plugging – Locating Plugs across the Formation

Portions of this item number were discussed in the above discussion.

Agenda Item 6. Dates for the 2010 Technical Advisory board meetings

In lieu of the amount of work to be accomplished, it was decided to schedule four meetings for 2010 instead of the usual two meetings. Carol Daniels will send out an email to each of the TAB member to determine dates available for the months of January, March, June and September of 2010.

Note: An email was sent out to the TAB members on November 3 with the chosen dates for the 2010 meetings as follows: January 21, March 18, June 10 and September 16. All the meetings are scheduled to be held in Harrisburg at the Rachel Carson State Office Building.

Agenda Item 7. 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 Art Yingling and the meeting adjourned at 12:50 pm.