

MEETING MINUTES

Oil and Gas Technical Advisory Board

December 16, 2020

[In accordance with Governor Tom Wolf's emergency disaster declaration and based on advice from the Department of Health regarding the mitigation of the spread of the novel Coronavirus (COVID-19), the Oil and Gas Technical Advisory Board (TAB) meeting was held virtually as a conference call via Skype for Business. This meeting was open to the public and persons with an interest in attending the meeting could do so via registration on the DEP oil and gas website.]

TAB MEMBERS PRESENT

Voting Members: David Yoxtheimer, Ph.D., P.G. (Chair), Fred Baldassare, P.G., Casey Saunders, P.E., Jeffrey Walentosky, P.G.

Non-voting Advisors: John Walliser, Esq., Michael Griffin, Ph.D., Susan Brantley, Ph.D.

DEP STAFF PRESENT

Scott Perry, Kurt Klapkowski, Joe Kelly, Seth Pelepko, Myron Suchodolski, Steve Brokenshire, Bruce Jankura, Crystal Magon, Michael Heuft, Ann Mathew, Brian Babb, Serena Oldhouser, Elizabeth Cushman, William Walsh, Rebecca Dunlap, Kate Cole, Elizabeth Davis, Anne Shapiro, Todd Wallace

CALL TO ORDER

Yoxtheimer called the meeting to order at 10:03 a.m. and opened the meeting with welcoming remarks. Yoxtheimer invited the Department to share any additional opening remarks.

Perry informed the Oil and Gas Technical Advisory Board (TAB) members and all individuals on the call that the meeting is recorded in its entirety and participation in the meeting conveys implied acceptance and consent for all meeting participants to be recorded.

Perry and Yoxtheimer agreed to limit introductions to TAB members and DEP employees and a roll call was taken to confirm the names of the TAB members and DEP employees who participated in this meeting.

APPROVAL OF MEETING MINUTES

Yoxtheimer asked the board members if there were any general comments related to the September 17, 2020 draft TAB meeting minutes. Walentosky made a motion to approve

the meeting minutes as presented. Saunders seconded the motion and the motion passed unanimously.

PUBLIC COMMENT

Yoxtheimer asked if any person had registered to provide public comment at today's TAB meeting. Wallace responded that no individual made arrangements with the Department to provide public comment.

PROPOSED CHAPTER 78 RULEMAKINGS (SURFACE ACTIVITIES AT CONVENTIONAL WELLS)

Klapkowski explained the events that led to the development of the proposed Chapter 78 rulemakings (proposed rulemakings) related to conventional wells.

In 2016, DEP advanced a final rulemaking that was approved by the Environmental Quality Board (EQB) and the Independent Regulatory Review Committee (IRRC) which contained amendments to cover both Chapter 78 conventional well surface activities and created a new Chapter 78a that addressed unconventional well activities. In 2016, Governor Wolf signed Act 52 into law that abrogated this final rulemaking but did not repeal Act 13. As a result of Act 52, the Pennsylvania Grade Crude Development Council (CDAC) was established to advise DEP in matters related to conventional wells. Also, the governor directed DEP to re-draft a rulemaking to address conventional wells.

Klapkowski reported that DEP met with CDAC on December 3, 2020 to discuss the following three categories of topics related to the proposed rulemakings: 1. areas of agreement, 2. topics that require further discussion with CDAC, and 3. topics where DEP and CDAC currently disagree. During the meeting on December 3, discussion was limited to the first category of topics (i.e., areas of agreement) due to limited time allocated by CDAC to the broader discussion of all three topic areas.

DEP requested to meet with CDAC in February 2021 to continue the discussion related to the other two topic areas; however, CDAC declined to meet with DEP as a result of a vote of the council (i.e., 8 members opposed meeting invitation and 7 members supported meeting invitation). Therefore, the next regularly scheduled meeting of CDAC is April 22, 2021.

Klapkowski stated that DEP plans to keep TAB informed of future progress; however, Act 52 directs DEP to consult with CDAC on the development of these proposed rulemakings. Klapkowski said that DEP will discuss the outcome of the April CDAC meeting with TAB at the next regular TAB meeting scheduled on May 5, 2021. Yoxtheimer agreed and offered to identify a "TAB Liaison" to communicate with DEP and CDAC as this proposed rulemaking is developed. Walentosky volunteered to serve as the "TAB Liaison." Walentosky stated that he understands the need for the proposed Chapter 78 regulations, but that he recognizes unique economic circumstances exist and suggested that TAB should consider running a "side car" with CDAC.

Walentosky asked DEP what the timeline is for advancing the proposed rulemaking. Perry responded that DEP is advancing the proposed rulemaking in two regulatory packages and is focusing on the three topic areas (or “buckets”) as referenced above. DEP plans to advance the proposed rulemaking to the EQB sometime in 2021, but a specific date has not been determined.

Walentosky asked if the Department has considered starting the process of updating technical guidance documents (TGDs) that will be affected by the passage of the Chapter 78 rulemakings. Perry responded that DEP has already updated most of the relevant TGDs such as the Water Supply Replacement TGD. Klapkowski echoed that the Department was already well down the path of updating the affected TGDs a number of years ago when the rulemaking was advanced by DEP as a “single” regulation to the, now defunct, Conventional Oil and Gas Advisory Committee.

UPDATE ON TECHNICAL GUIDANCE DEVELOPMENT

Final Chain Pillar Technical Guidance Document (TGD)

Pelepko reported that the Department’s review of the public comments associated with the final Chain Pillar TGD is completed and DEP considered the comments that were submitted by TAB earlier in 2020. It is anticipated this TGD will be published in the Pennsylvania Bulletin sometime during the first quarter of 2021.

Saunders asked if the Department had any follow up questions for TAB regarding its comments and Pelepko responded that DEP did not have further questions. Pelepko reported that DEP responded to the two comments that were received from TAB and has documented that in the Comment and Response Document.

Pressure Barrier Policy

Pelepko reported that this policy applies only to unconventional operators, but that the requirement to develop a pressure barrier policy applies to both unconventional and conventional operators. The Department received 103 comments related to the Pressure Barrier Policy, which included 62 technical/substantive comments and 41 editorial comments. Five commenters submitted 91 of the 103 comments.

Pelepko said that it is the goal of DEP to share the draft final version of this policy with TAB at the first meeting of 2021. Walentosky stated that he appreciated the ongoing dialogue on this matter since the past TAB meeting and DEP’s willingness to consider additional comments submitted by TAB.

Area of Review TGD

Pelepko reported that final publication of this TGD is imminent and it is undergoing final internal review by the Department.

LEGACY WELL UPDATE

Pelepko provided a general update on the status of legacy wells in Pennsylvania and the implementation and operation of DEP's well plugging program. The update included the following:

- Staff from DEP's Office of Oil and Gas Management participated in a recent workshop on orphan and abandoned wells hosted by the American Association for the Advancement of Science.
- DEP's oil and gas program developed and published a new Story Map that features well plugging projects throughout Pennsylvania. The Story Map is currently available to the public on the DEP oil and gas webpage under the category titled "What's New."
- DEP's oil and gas program continues to oversee ongoing orphan and abandoned well contracts and responds to emergency well plugging projects as they arise.
- The oil and gas program completed a technical review of grant applications that were received by the Commonwealth Financing Authority for well plugging projects.
- Goals for the oil and gas program in 2021 include the development of a white paper regarding the state of affairs of legacy wells and the development of a technical paper suggesting a need for sustainable funding related to legacy well pluggings.

Yoxthimer asked how many legacy wells are being decommissioned as a result of unconventional industry efforts. Pelepko responded that he is not certain of the specific number of wells, but he estimates that probably a handful of such wells are being decommissioned each year.

Baldassare asked if the Department considers the potential for stray gas migration to be exacerbated by the plugging of certain orphan and abandoned wells and if DEP factors this into the prioritization of potential hazards. Pelepko responded that the Department considers potential stray gas migration before it commences with the plugging of legacy wells.

Brantley inquired about the rate at which orphan and abandoned wells are being added to DEP's list of legacy wells. Pelepko responded that it has done some analyses and modeling on the number of orphan and abandoned wells that are added annually versus the number of such wells that are plugged. Based on current trends, DEP is unable to maintain pace with plugging the universe of legacy wells given the rate at which such wells are being added to the inventory without a new source of significant funding. Perry stated that DEP has been vigilant in pursuing companies and holding them accountable for the plugging of company-owned wells prior to bankruptcy proceedings. Perry also

acknowledged the efforts of some conventional operators that have voluntarily plugged wells via the DEP well adoption program. Saunders stated that CONSOL and the coal industry has also pursued voluntary efforts to plug wells.

ELECTRICAL LOGS AND DEEPEST FRESH GROUNDWATER

Pelepko acknowledged Yoxtheimer and the efforts of the Pennsylvania State University and the work that has been accomplished in the area of magnetotelluric study techniques. Magnetotellurics (MT) is a method that utilizes naturally occurring, broadband electromagnetic waves over the Earth's surface to image subsurface resistivity structure and is used in a number of ways such as the exploration for oil and gas and in groundwater monitoring and analysis.¹

Pelepko informed TAB that DEP is contacting unconventional oil and gas operators to request that they voluntarily provide electrical logs to DEP so it can evaluate and assess the electrical log data to gain a better understanding of the nature of deepest fresh groundwater in Pennsylvania. Walentosky asked if DEP plans to establish a formal definition of deepest fresh groundwater and Pelepko responded that there is much variability in groundwater total dissolved solids (TDS) levels that could inappropriately influence how deepest fresh groundwater might be defined so it is not certain at this time whether a numerical definition will be established.

Yoxtheimer stated that the results from an MT study in Bradford County are in the process of being finalized and might be able to be shared with the Department sometime during the first quarter of 2021.

Brantley asked if electrical logs will be made available to the public. Pelepko responded that electrical logs that are submitted to DEP electronically via the GreenPort will be available to the public.

NATURAL GAS STORAGE FIELDS

Pelepko provided an update on the status of natural gas storage fields in Pennsylvania. Currently, there are approximately 60 natural gas storage fields in the commonwealth and the laws that apply to storage fields go back to the mid-1950s. The Department has been working productively with natural gas storage operators and has updated well integrity testing plans that pertain to natural gas storage wells. Pelepko stated that DEP developed a risk-management tool that aides the Department in focusing its inspection efforts.

ESCGP-3 PRIORITIZED REVIEW

Kelly discussed the reason for DEP transitioning to a prioritized permit review process. Innovative approaches through design and implementation of environmentally enhanced Best Management Practices (BMPs) and superior construction practices reduce environmental impacts from oil and gas operations. To incentivize these technologies

¹ Gupta, Harsh and Roy, Sukanta. 2007. Geothermal Energy: An Alternative Resource for the 21st Century. Elsevier B.V.; ISBN 9780-0-444-52-875-9. (ScienceDirect)

and practices, the Department intends to replace the ESCGP Expedited Review process with a Prioritized Review process that will allow for voluntary participation by industry. Permit applications submitted as Prioritized Review will be given a score based on the BMPs and environmentally superior construction practices proposed. Projects that score well will be given priority to be reviewed before projects that are not submitted as Prioritized Review.

The Department hosted six ESCGP-3 workgroup meetings in 2020 and the following four topics were discussed: planning, construction practices, well site restoration and impaired resource enhancements.

Kelly presented and discussed the ESCGP-3 Prioritized Review Process TGD with the TAB members. The TGD includes two separate scoring categories. Category A includes nine voluntary practices that provide up to nine points and Category B includes six voluntary practices that provide up to 12 points. One point is awarded to an operator for the voluntary participation in a pre-application meeting with DEP.

Kelly explained that the Department plans to publish the TGD in the first quarter of 2021 for comment. The ESCGP ePermit will be updated to include the provisions of the priority review and the current expedited review mechanism will be removed.

Walentosky commended DEP on the sharing of concepts related to the prioritized permit review process, but explained that he is concerned about the usefulness of the prioritized review TGD and suggested that there should be incentives built into the process. Specifically, Walentosky is concerned that operators might decide to not use the voluntary priority review process and he recommended that another workgroup meeting be scheduled by DEP to discuss the matter further prior to publishing the TGD for comment. Perry responded that the Department is willing to host another meeting during the public comment period, but it does not want to further delay publication and public comment. The Department will make any adjustments to the prioritized review TGD in response to comments received during the comment period.

OIL AND GAS RELATED HEALTH STUDIES

Perry reported that the Pennsylvania Department of Health is currently working with an academic partner to develop two oil and gas related health studies. One study is a short-term study and the other is a long-term study. The reports are expected to be available sometime during the fall of 2022.

UNCONVENTIONAL PERMIT FEE REVENUES AND EXPENSES

Perry stated that the current unconventional permit fee is \$12,500 and went into effect on publication in the *Pennsylvania Bulletin* on August 1, 2020. The development of this fee factored in the receipt of 2,000 unconventional permits annually; however, DEP is receiving far fewer unconventional permits and this trend is not expected to change anytime soon. In contrast to revenues, the costs to support Pennsylvania's oil and gas

program are expected to rise as the universe of new wells that are drilled each year also increases.

Despite the recent increase in unconventional permit application fees, revenues continue to decline significantly due to a decreased number of permit applications received annually. If this trend continues, the Well Plugging Fund that pays for Pennsylvania's oil and gas program will, likely, be insolvent within the next three years. The current fee structure is based on a one-time permit fee to cover the ongoing costs to administer the DEP oil and gas program and this framework is unpredictable and not sustainable.

Perry reported that in conformance with Pennsylvania's oil and gas regulations, the Department is required to evaluate these fees and recommend regulatory amendments to the EQB every three years to address any disparity between the program income generated by the fees and DEP's cost of administering the program with the objective of ensuring fees meet all oil and gas program costs and the program is self-sustaining. The Department last submitted a well permit fee report to the EQB in 2018; therefore, DEP is currently in the process of preparing the next 3-Year Fee Report to meet this regulatory obligation.

NEW BUSINESS

Yoxtheimer requested TAB members and DEP to suggest possible meeting dates for 2021. The following meeting dates were selected:

Wednesday, May 5 (9:00 am)
Thursday, September 9 (9:00 am)
Thursday, December 16 (9:00 am)

ADJOURNMENT

Yoxtheimer asked if there was a motion to adjourn the meeting. Saunders made a motion and Walentosky seconded. Motion passed unanimously, and the meeting was adjourned at 1:13 pm.