MEETING MINUTES

Oil and Gas Technical Advisory Board

November 1, 2017

TAB MEMBERS PRESENT

Voting Members: Bryan McConnell, P.G. (Chair), Robert Hendricks, P.G., Casey Saunders, P.E., David Yoxtheimer, P.G. (via WebEx), Fred Baldassare, P.G.

Non-voting Advisors: W. Michael Griffin, Ph.D., John Walliser, Esq. (via WebEx)

DEP STAFF PRESENT

Scott Perry, Kurt Klapkowski, Seth Pelepko, Bruce Jankura, Harry Wise, Joe Kelly, Steve Brokenshire, Myron Suchodolski, Todd Wallace, Elizabeth Davis, Joseph Iole, Ann Mathew, Jennifer Zarefoss, Roma Monteiro, Neil Bakshi

CALL TO ORDER

A meeting of the Oil and Gas Technical Advisory Board (TAB) was held in Room 105 at the Rachel Carson State Office Building, 400 Market Street, Harrisburg. This meeting was open to the public. McConnell called the meeting to order at 10:03 a.m.

APPROVAL OF MEETING MINUTES

McConnell asked TAB members if there were any comments related to the draft August 23, 2017 TAB meeting minutes. Hendricks made a motion to approve the meeting minutes as presented. Saunders seconded the motion. There was no further comment. The motion passed unanimously.

AMENDMENT OF TAB BYLAWS

Perry stated that on further review of the TAB Bylaws that were approved at the August 23, 2017 meeting, DEP observed one additional matter that TAB should consider. Specifically, the first sentence in Article VII (Voting) currently states "Each member of the Advisory Board's membership shall be entitled to exercise one vote in each matter placed before the Advisory Board for which a vote is called."

DEP recommends that TAB consider revising this sentence to read as follows: "Each member of the Advisory Board's membership shall be entitled to exercise one vote in person, or via teleconference, in each matter placed before the Advisory Board for which a vote is called." This revised sentence will memorialize the ability for the voting members of TAB to participate in a vote either in person or by way of teleconference. At the August 23, 2017 meeting, TAB

voted on a similar edit to the TAB Bylaws for "designated alternates" of TAB members to vote either in person or by way of teleconference, but inadvertently did not specifically address this practice for the voting members of TAB.

Hendricks made a motion to revise the first sentence in Article VII of the TAB Bylaws to read "Each member of the Advisory Board's membership shall be entitled to exercise one vote in person, or via teleconference, in each matter placed before the Advisory Board for which a vote is called." Also as part of the motion, Hendricks moved to waive the requirement for DEP to provide a copy of the proposed amendment one month prior to the TAB meeting as specified in Article X of the current bylaws. Saunders seconded the motion and the motion was passed unanimously by the TAB board members.

CLASS II-D INJECTION WELLS AND HOW THEY ARE REGULATED

Pelepko provided background and history related to the permitting process related to Class II-D Underground Injection Control (UIC) wells. Pelepko explained that the U.S. EPA maintains primacy for the UIC program; however, DEP conducts a review of the surface activities associated with the well permit application. DEP conducts a review of geological aspects of the permit as well as the mechanical integrity of the injection well and considers the potential for induced seismic events. DEP develops permit conditions that specifically address seismic considerations associated with the well permits.

Pelepko stated there is a link on DEP's oil and gas web page that makes a variety of UIC-related information available to the public.

PROPOSED GUIDANCE ON DEP'S REGULATORY PROCESS, TECHNICAL GUIDANCE DEVELOPMENT PROCESS AND DEP ADVISORY COMMITTEES

Bakshi of DEP's Policy Office provided a PowerPoint presentation to TAB regarding proposed edits to three DEP guidance documents including: Technical Guidance Review Process, Regulatory Review Process and Advisory Committee Guidelines.

Bakshi explained that two of the guidance documents were originally developed in 1996 and one was developed in 1998. DEP intends to update the guidance documents to improve the clarity of the language, modernize outdated processes and initiate a meaningful conversation between DEP and stakeholders on policy development matters.

Each of these guidance documents are currently available on the DEP website and the Department is accepting comments from the public via the eComment tool on DEP's website. Bakshi also provided the DEP Policy Office e-mail resource account in case any TAB member wants to contact DEP's Policy Office directly.

AREA OF REVIEW TECHNICAL GUIDANCE DOCUMENT

Klapkowski provided background on the history of the development of the proposed Area of Review (AOR) Technical Guidance Document (TGD) and explained that the purpose for bringing this TGD to TAB is to seek an endorsement of the board for DEP to proceed with publishing this document as final in the *Pennsylvania Bulletin*.

Pelepko presented to TAB each of the substantive areas of the AOR TGD that were amended based on comments received during the public comment period.

Hendricks thanked DEP for its efforts in advancing this TGD through the development process over the past couple of years and stated that it appears to be in good shape. Hendricks explained that it is likely that after the AOR TGD is published as final and put into practice there could be some minor issues that might need to be revisited in the future, but this version appears to be in good shape. Hendricks asked DEP where it would like to go from here.

Klapkowski explained that since this document is a guidance document, the board is not obligated to make a formal motion to approve the publication; however, DEP would appreciate if TAB would agree to make a motion to recommend DEP to publish this version of the TGD as final in the *Pennsylvania Bulletin*.

Hendricks made a motion that DEP should publish the version of the AOR TGD as presented to TAB as final in the *Pennsylvania Bulletin*. Baldassare seconded the motion. There were no further comments. The motion passed unanimously.

GUIDELINES FOR CHAIN PILLAR DEVELOPMENT AND LONGWALL MINING ADJACENT TO UNCONVENTIONAL WELLS

Klapkowski provided background on the history of the development of this proposed "Guidelines for Chain Pillar Development and Longwall Mining Adjacent to Unconventional Wells" (Chain Pillar Guidelines) and explained that the purpose for bringing this document to TAB is to seek an endorsement of the board for DEP to proceed with publishing this document as interim final in the *Pennsylvania Bulletin*.

Klapkowski also acknowledged the excellent collaborative efforts of TAB's coal-gas sub-committee, DEP's Office of Active and Abandoned Mine Operations, the federal Mine Safety and Health Administration, industry representatives, and other stakeholders in working in a productive and professional manner to assist DEP in the development of these Chain Pillar Guidelines.

Saunders provided a summary of the content of the guidelines that are intended to allow coal and gas operators the ability to fully utilize their respective mineral resources, while protecting public health and safety, the safety of mine workers and the environment.

Pelepko provided the board members with a detailed overview of the contents and recent changes that led to the creation of the interim final version of the Chain Pillar Guidelines.

Saunders made a motion for DEP to proceed with publishing this version of the Chain Pillar Guidelines as interim final in the *Pennsylvania Bulletin*. The motion was seconded by Baldassare. There was no further discussion. The motion passed unanimously.

Chairman McConnell acknowledged the good work of the coal-gas committee and the efforts of all involved that led to the development of the interim final version of the Chain Pillar Guidelines.

DEP received a question from a member of the public via the Webinar. Mr. Tom Yarnick, affiliated with XTO Energy, asked whether the requirement for long-term monitoring at gas wells requires that such monitoring be conducted in "real-time". Pelepko explained that there is a requirement for quarterly integrity testing that requires a single point-in-time monitoring of gas production and production annulus pressures. Pelepko stated that it is his understanding that most unconventional gas companies have adopted real-time monitoring of gas production and production annulus pressures and flows; however, this is an industry practice and is not mandated by regulation.

WATER SUPPLY REPLACEMENT TECHNICAL GUIDANCE DOCUMENT

Klapkowski stated that this TGD was published as interim final along with the Chapter 78a rulemaking on October 8, 2016 and included a 60-day public comment period. According to Brokenshire, DEP received comments from six commentators of which three were from industry and three were from the environmental community. Somewhere between 75 to 100 comments were submitted to DEP for review and consideration. The TGD was revised by DEP to address the comments received during the public comment period.

Brokenshire explained that most of the comments received during the public comment period were clarifying in nature and he provided a summary of several of the most substantive comments received.

Hendricks stated that the TGD looks pretty good, but asked if DEP would consider reconvening the Water Supply Replacement workgroup to discuss several additional issues related to the TGD. Brokenshire responded that he is willing to reconvene the workgroup, but suggested that the group meet sooner rather than later. Hendricks agreed.

TAB members took the opportunity during the meeting to ask questions about specific sections of the TGD and suggested multiple edits to the current document. Klapkowski explained that to conform to the suggested timelines in DEP's policy on the development of technical guidance, a follow-up meeting of the Water Supply Replacement workgroup should be scheduled as soon as possible. DEP and TAB members agreed to schedule a follow-up workgroup meeting sometime during the week of November 13 at a location in New Stanton to be determined.

TECHNICAL GUIDANCE DOCUMENT DEVELOPMENT UPDATES

Klapkowski provided an update on the status of several ongoing technical guidance documents:

Pressure Barrier Policy:

This policy is currently in the draft stage of development. The Marcellus Shale Coalition (MSC) provided written comments to DEP. A follow up conference call with the MSC to discuss their

comments occurred on October 11. DEP will continue moving this policy forward in accordance with DEP's policy on the development of technical guidance documents.

Integrated Contingency Plan TGD:

This TGD will consolidate several existing planning requirements for unconventional well sites (i.e., emergency response plans, site containment plans, Preparedness, Prevention and Contingency plans) into a single Integrated Contingency Plan. DEP intends to publish this TGD with a 30-day public comment period.

Erosion and Sediment Control Policy:

In 2012 when DEP published the Erosion and Sediment Control General Permit-2 (ESCGP-2), it also developed a companion Erosion and Sediment Control Policy to clarify how DEP would approach various erosion and sediment control matters. Klapkowski stated that as DEP is working to develop an updated ESCGP-3 permit it will also be updating the Erosion and Sediment Control Policy. Klapkowski reported that DEP will establish three separate workgroups to address the following: a) update the Erosion and Sediment Control forms themselves; b) expedited permit review process that promotes superior environmental outcomes; and c) electronic permitting tool to receive ESCGP-3 permits.

PUBLIC COMMENT

Chairman McConnell announced that TAB was prepared to receive public comment. No individuals signed up to present public comment and no individuals participating via the WebEx expressed an interest in providing public comment.

NEW BUSINESS

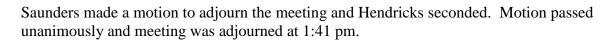
Chairman McConnell stated that TAB should consider selecting meeting dates for calendar year 2018. Klapkowski suggested that TAB consider scheduling the first meeting of 2018 in February to maintain a 90-day rotating schedule of meetings. Perry stated that it is possible DEP might request a special meeting prior to February 2018 for the purpose of inviting DEP's Bureau of Air Quality to present on overview of the draft updates to the GP5/GP5a permits.

TAB and DEP identified the following dates as tentative meeting dates in 2018, depending on the availability of Conference Room 105 in the Rachel Carson State Office Building, Harrisburg:

February 7 or 8 May 10 August 8 November 7

Wallace stated he would check the availability of Conference Room 105 and get back to TAB and DEP staff to confirm the actual meeting dates for 2018.

ADJOURNMENT



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