

MEETING MINUTES

Oil and Gas Technical Advisory Board

September 9, 2021

[The Oil and Gas Technical Advisory Board (TAB) meeting was a hybrid meeting that allowed participants to join the meeting in person or virtually. The meeting was held in Room 105 of the Rachel Carson State Office Building and virtual access was via the TAB website.]

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

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

DEP STAFF (Meeting Participants)

Scott Perry, Kurt Klappkowski, Joe Kelly, Seth Pelepko, P.G., Ann Mathew, P.G., Ali Tarquino Morris, David Allard, Crystal Magon, Todd Wallace

CALL TO ORDER

Perry opened the meeting and informed those in attendance that the meeting is recorded and participation in the meeting serves as consent to be recorded. Perry conducted a roll call of the TAB members since all members participated remotely. Perry announced the names of the DEP staff who were present. Yoxtheimer provided welcoming remarks and noted that the meeting is the first hybrid meeting of TAB.

APPROVAL OF MEETING MINUTES

Yoxtheimer asked the board members if there were any comments related to the May 5, 2021 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 invited comment from the following eight individuals who registered in advance of the meeting to provide comment (listed in order of request received): Heaven Sensky (she/her), Center for Coalfield Justice; Karen Feridun, Berks Gas Truth & Better Path Coalition; Cathy Lodge, public/resident (Bulger, PA); Loren Anderson, Marcellus Shale Coalition; Marsha Haley, M.D., UPMC; Gillian Graber, Protect Penn-Trafford (PT); James Cato, Mountain Watershed Association; and Lois Bjornson, Clean Air Council. Yoxtheimer explained that each individual is provided up to five minutes to provide comment.

Heaven Sensky was not present in Conference Room 105 and did not respond virtually when Yoxtheimer invited her to deliver comments to TAB.

Karen Feridun spoke about concerns associated with the roadspreading of brine and its effect on the environment. Feridun stated that there is ample evidence that roadspreading of drilling waste is dangerous to the environment and human health and stated that the ban on roadspreading of unconventional waste on roads should also apply to the roadspreading of conventional waste.

Cathy Lodge stated that she hopes TAB will advise DEP to refrain from tweaks to regulations, such as brine spreading or handling of radioactive shale waste which would give the Department the appearance of trying to circumvent public participation. Ms. Lodge also stated that a board made up of individuals from the industry that the DEP is tasked with regulating should not be involved in the formulation, drafting, and presentation stages of regulations relating to unconventional oil and gas extraction especially without the public being granted similar liberties.

Loren Anderson commented on the Final Draft Guidance Document on Radioactivity Monitoring at Solid Waste Processing and Disposal Facilities and suggested changes to the document that would affect the applicability section, definition section and Appendix E.

Marsha Haley, M.D. commended DEP for advancing the proposed Guidance Document on Radioactivity Monitoring at Solid Waste Processing and Disposal Facilities. Dr. Haley posed three questions related to this guidance to DEP.

Gillian Graber was unable to participate in the TAB meeting; therefore, Patrick Campbell, Project and Outreach Coordinator at Protect PT, spoke on behalf of Ms. Graber. Mr. Campbell delivered several comments related to the Proposed Chapter 78 Annex A for conventional oil and gas wells. He stated that fluids currently identified as “brine” should be identified as “flowback” or “produced water.” He stated that the definition of “flood plain” is arbitrary and should be based on the most recent available science. Also, he stated that DEP should require conventional oil and gas developers to prepare and implement a Radiation Protection Action Plan. He then stated that land application for disposal of residual waste should include “contaminated drill cuttings.” Finally, Mr. Campbell stated that open containment poses an unacceptable risk and lined impoundments should also be phased out and no waste should be buried on site.

James Cato explained that the Mountain Watershed Association has been taking soil samples for several months to test for elevated radiation levels such as Radium-226 using “inhouse rate monitors.” Samples have been taken in the areas of New Stanton, Yukon and McClellandtown and high amounts of radiation have been detected, sometimes at levels three times greater than expected baselines. Official sample results are pending; however, based on the sampling conducted thus far, he stated that environmental standards are necessary and DEP should avoid policies such as roadspreading of brines that can exacerbate this situation.

Lois Bjornson explained that she lives on a road in a rural community where the roadspreading of brine takes place. Ms. Bjornson stated that the practice of roadspreading of brine is harmful to families like hers that live near roads in rural communities due to the toxic chemicals and radioactivity of brines. She requested that TAB take her comments into consideration.

Yoxtheimer thanked all individuals who provided comment and said that TAB will consider these comments and any written comments received.

RADIOACTIVITY MONITORING AT SOLID WASTE PROCESSING AND DISPOSAL FACILITIES TECHNICAL GUIDANCE DOCUMENT

Dave Allard, DEP Director of Radiation Protection, provided background and discussed the status of this technical guidance document (TGD). This TGD was originally developed about 20 years ago and this proposed revision to the guidance was published in the *Pennsylvania Bulletin* in October 2019. The Department received about 200 comments and the Bureau of Radiation Protection is coordinating with the Bureaus of Waste Management and Oil and Gas Planning and Program Management to prepare responses to these comments.

Walentosky asked if consideration has been given by the Department to develop a policy document related to radiation monitoring that is focused exclusively on oil and gas operations and a separate guidance document that is related to general industry. Allard responded that the oil and gas regulations reference the existing TGD so the approach taken by the Department was to revise this TGD.

Walentosky commented that the term “oil and gas well site” is used throughout the TGD, so it would be helpful to clarify this term as it is used in the document.

At Walentosky’s request, Allard summarized the 2015 TENORM Study that was published by the Department.

Brantley asked how the Department incorporates public health and medical experts into the technical guidance development process. Allard stated that medical professionals such as physicians, health physicists and dentists are represented on the Radiation Protection Advisory Committee.

WMGR123 PERMIT UPDATE

Ali Tarquino Morris, DEP Director of Waste Management, provided a detailed update on the status of the WMGR123 Permit. She explained this is a statewide permit that authorizes permittees to seek coverage under its terms and conditions to store, process, transfer and reuse wastewater generated from oil and gas operations to develop or hydraulically fracture an oil and gas well. Any solids generated from such operations must be managed as residual waste.

In 2020, DEP accepted comments on proposed revisions to the WMGR123 permit and on January 4, 2021, the Department published the revised permit. The Department also renewed coverage issued to 49 existing operators under the revised terms and conditions of WMGR123. Following this, DEP received questions regarding the procedures that were used to provide public notice of the 49 applications for renewed coverage. In response, DEP extended another opportunity for public input on the 49 facilities by publishing notice for receipt of public comment in the *Pennsylvania Bulletin*. In conjunction, DEP published notice of nine additional applications of coverage and six applications requesting modifications to previously issued coverage.

As a result of passage of House Bill 336 into law on July 9, 2021, DEP was required to develop a new General Permit consistent with WMGR123 except that it must apply to facilities/operations that are more temporary in nature. By July 1, 2022, DEP must finalize this new permit. DEP intends to publish a draft permit for comment before the end of 2021.

Walentosky commented that he supports the use of WMGR123 since it promotes the re-use of oil and gas flowback fluids. He asked if there will be significant changes or additions to the terms and conditions of this permit. Morris responded that the Department is still evaluating comments. Walentosky asked when the new permit is expected to be published and in use. Morris explained that the 49 existing facilities can operate under the existing permit, so only 15 applications for new coverage are under review for modifications.

DRAFT PROPOSED CHAPTER 78 RULEMAKING (ENVIRONMENTAL PROTECTION STANDARDS)

Klapkowski summarized the events that led to the development of the draft proposed Chapter 78 rulemakings related to surface activities at conventional well sites.

Klapkowski stated that the Office of Oil and Gas Management considered comments received on the Environmental Protection Standard proposed rulemaking and plans to present the package to the Environmental Quality Board sometime during the first quarter of 2022.

DRAFT PROPOSED CHAPTER 78 RULEMAKING (WASTE MANAGEMENT)

Klapkowski stated that Sections 78.70 and 78.70a that pertain to the roadspraying of brine for road stabilization and dust suppression and the pre-wetting, anti-icing and de-icing of roads are not addressed in this proposed regulation. The moratorium on the roadspraying of brine from conventional wells continues to remain in effect.

Klapkowski explained what is broadly contained in the rulemaking such as the Area of Review requirements and clarifications to the section of the regulations that pertain to Preparedness, Prevention and Contingency (PPC) Plans. Also, the section of the

regulations that pertain to the reporting and remediation of spills and releases at conventional oil and gas well sites is significantly developed in this proposed rulemaking.

Brantley asked if DEP could clarify if references to submitting “written reports” in the proposed rulemaking means that the report should be submitted electronically or in hardcopy. Klapkowski explained that since about 2015 when DEP advanced the Chapter 78a unconventional rulemaking, the Department’s intent was to have forms submitted to DEP electronically. Reports required under this proposed rulemaking are also required to be submitted electronically.

Baldassare inquired about DEP’s obligation, process or timeline for responding to inquiries in an operators submission of Site Characterization Reports or other reports that might be cause for contentions or questions. He also asked if DEP has a process for addressing those documents that are public. Klapkowski stated that he believes there are processes contained in the Act 2 cleanup program that address this matter, and he would check into this matter further.

Walentosky asked if the Department plans to take both proposed rulemakings (Environmental Protection Standards and the Waste Management) to the December Pennsylvania Grade Crude Development Advisory Council (CDAC) meeting. Klapkowski responded that DEP plans to take the version of Annex A of the Environmental Protection Standards proposed rulemaking to CDAC that is also intended to be submitted to the EQB in December. As for the Waste Management proposed rulemaking, Klapkowski explained that the Department is still reviewing comments; therefore, that rulemaking is trailing behind the Environmental Protection proposed rulemaking.

Walentosky asked what the Department sees as TAB’s role and obligation in the regulatory review process for these two proposed rulemakings. Klapkowski responded that the Oil and Gas Act requires the Department to take rulemakings of a technical nature to TAB. However, DEP has typically gone beyond this statutory requirement and also brought non-technical documents, such as guidance documents, to TAB for review. Pursuant to Act 52, the Department consults with CDAC on regulations that pertain to conventional oil and gas matters; however, this statute does not exclude DEP from taking such matters to TAB. Walentosky asked if TAB and CDAC should conduct joint meetings on such matters. Perry responded that TAB is welcome to approach CDAC about this suggested approach.

Walentosky requested that DEP share the comments with TAB members that were provided to CDAC at the April and August meetings. Klapkowski agreed to do so.

UPDATE ON EROSION AND SEDIMENT CONTROL (E&S) PLAN TEMPLATE FOR WELL PLUGGING ACTIVITIES

Kelly explained the purpose of this plan template is to assist oil and gas well plugging operators in better understanding the Chapter 102 requirements that apply specifically to

small well plugging projects. Instead of relying on the Department's comprehensive E&S Best Management Practices Manual that is about 550 pages in length, this template document provides instruction for developing an E&S Plan for projects with earth disturbance between five thousand square feet and five acres.

Walentosky asked how DEP intends to inform the regulated community of this tool. Kelly responded that, when finalized, the document will be available on the DEP website and notice will be published in the DEP Oil and Gas Newsletter. Walentosky suggested that DEP inform and share the document with the CDAC Well Plugging Workgroup. Perry agreed that this is a good suggestion and also stated that DEP might share the document with the Pennsylvania Independent Oil and Gas Association (PIOGA) and Pennsylvania Independent Petroleum Producers (PIPP).

UPDATE ON GEOLOGIC HAZARD MITIGATION PLANNING DOCUMENT FOR EROSION AND SEDIMENT CONTROL GENERAL PERMITS (ESCGPs)

Kelly explained that Chapter 102.4 and Chapter 102.8 include requirements that an operator must include Best Management Plans to minimize potential impacts of potentially hazardous geologic formations or soil conditions. The Department drafted this document to establish minimum criteria for conducting geohazard investigations and establishing effective mitigation strategies that could be used by the regulated community.

Walentosky asked if this document is intended to be published as a Technical Guidance Document and Kelly responded that this document is not intended to be a stand-alone TGD, rather the elements of this document will be incorporated into the Notice of Intent (NOI) Instructions to the Erosion and Sediment Control General Permit-3.

Walentosky asked if the Department would consider receiving additional comments on the document, and Kelly responded that it is his intention to reconvene the ESCGP Workgroup to discuss the final version before incorporating the criteria into the NOI Instructions.

Yoxtheimer asked if Kelly could provide some examples of geologic hazards that the Department has observed and encountered. Kelly responded that examples include areas where coal seams are expressed at, or near, the surface; karst geology where there is potential for sink holes; slope instability areas and areas of acid-forming geology such as pyritic formations.

UPDATE ON TECHNICAL GUIDANCE DEVELOPMENT

Guidelines for Chain Pillar Development and Longwall Mining Adjacent to Unconventional Wells TGD (Final)

Pelepko reported that this final guidance was published in the *Pennsylvania Bulletin* on August 28, 2021. The most substantive revision to this guidance relates to a new risk-

based process for evaluating conventional wells that do not have fully cemented production strings and are located in advance of sub-surface mining.

Pressure Barrier TGD for Unconventional Operations (Final)

Pelepko reminded TAB members that this guidance was previously presented to TAB and is currently undergoing finalization. The target date for publication as a final TGD in the *Pennsylvania Bulletin* is the fourth quarter of 2021.

Guidelines for Implementing Area of Review (AOR) Regulatory Requirement for Unconventional Wells (Final)

Pelepko reminded TAB members that this guidance document was presented to TAB previously. This document was published as final in the *Pennsylvania Bulletin* on September 4, 2021. The most substantive revision to this guidance pertains to when an unconventional well might communicate with an adjacent unconventional well during hydraulic fracturing operations.

Prioritized Review Process for ESCGP-3 (Draft)

Kelly explained that the prioritized review process is a voluntary process that is intended to replace the current expedited review process. The process is based on an applicant selecting a series of Best Management Practices (BMPs) not typically required by a Chapter 102 ESCGP permit. An application must score above a certain point-threshold to be eligible for prioritized review of the permit. This process is not available to Federal Energy Regulatory Commission (FERC) related projects. Kelly explained that the document was published on August 28, 2021 for a 30-day comment period and it is scheduled to close on about September 27, 2021. The Department is currently receiving comment via the Department's e-comment tool. After the comment period closes, DEP will reconvene the ESCGP-3 Prioritized Review workgroup to review the comments that are received and will present a revised draft document to TAB at a future meeting.

Environmental Considerations for the Construction and Operation of Trenchless Technology (Draft) & Chapter 105 Alternatives Analysis (Draft)

Kelly reminded TAB that these documents were presented to TAB in January 2020 by the DEP Regional Permit Coordination Office. Both documents were developed by DEP in response to a stipulated settlement. The DEP Water Program initiated the Alternatives Analysis document prior to the stipulated settlement and it does not change specific requirements, rather it is intended to provide guidance to enable greater consistency across DEP regional offices as it relates to Chapter 105 Alternative Analysis reviews. This document was published in the *Pennsylvania Bulletin* on September 4, 2021 for a 30-day comment period.

Kelly explained that the Trenchless Technology document is expected to be published sometime during the fourth quarter of 2021.

Kelly invited any final questions from TAB members regarding any of the TGDs that were discussed.

Walentosky commended the work that was accomplished by the ESCGP-3 Prioritized Review Workgroup, but he expressed concerns that the resulting product might not be used to the extent expected based on feedback he has received from the regulated community. Perry responded that DEP is committed to the success of this process and is willing to make adjustments to the document, if necessary.

Walentosky commented that he is interested that TAB continue to be informed of the progress that is made related to the Trenchless Technology documents. Kelly explained that the DEP Regional Permit Coordination Workgroup meets on a regular basis and he will communicate this interest. Kelly reminded TAB that this document is not limited in scope to oil and gas activities, rather it applies to all sorts of trenchless operations. Kelly stated he would do his best to ensure that oil and gas activities are appropriately addressed within the document.

Saunders commended the Department and in particular the efforts of Seth Pelepko in the effort to bring the development and finalization of the Chain Pilar TGD full-circle.

FEDERAL OIL AND GAS WELL PLUGGING STIMULUS LEGISLATION UPDATE

Klapkowski summarized the legislative history and components to the federal Bipartisan Infrastructure Framework (BIF) that passed the Senate in August and is currently in the House of Representatives. This proposed legislation includes a significant amount of funding to address multiple infrastructure-related issues including the plugging of orphan wells across the nation on both federal and state owned lands.

The current proposal includes four separate funding vehicles including an initial grant in the amount of about \$25 million for eligible states. There is about \$2 billion available to states in the form of “formula grants” which would amount to approximately \$60 million annually to Pennsylvania over a period of five years (total of \$300 million for Pennsylvania). Two additional funding streams include a “matching grant” in which the federal government will match state spending up to \$30 million that exceeds the 10-year average funds payed by the state. Finally, a “Regulatory Improvement” grant in the form of two \$20 million increments for a total allocation of up to \$40 million where states demonstrate improvements to its regulatory requirements regarding the plugging of abandoned wells.

Yoxtheimer asked if the Department has a sense for how much capacity exists in Pennsylvania in the form of workforce required to handle the workflow associated with implementing this federal framework. Klapkowski responded that the Department has surveyed the Pennsylvania Independent Oil and Gas Association (PIOGA) and Pennsylvania Independent Petroleum Producers (PIPP) to determine the current capacity that exists in Pennsylvania. As a result of this federal legislation, Pennsylvania is not alone and other states are doing similar analyses of capacity needs. The Department is a member of the Interstate Oil and Gas Compact Commission (IOGCC) and is in discussions with that organization and other member states regarding this matter.

Brantley asked if oil and gas operators or other types of companies will be involved in plugging wells under this initiative. Klapkowski responded that it could be a mixture of both oil and gas operators and other entities. Klapkowski explained that with the current interest in addressing climate change, there has been greater attention to carbon credits that could serve to engage certain types of companies into the well-plugging arena that have not typically been involved in such matters.

Brantley asked if watershed groups or public advocacy groups are eligible to receive funding under the proposed BIF legislation. Klapkowski explained that the Department would likely start with running plugging projects through the existing construction contracting process; however, the Department is considering other alternative approaches such as possible grant programs. One example that has been considered is a possible grant program where local municipalities throughout Pennsylvania would partner with DEP to locate orphan and abandoned wells.

Brantley asked what approach DEP intends to use to get the federal funding obligated as quickly as possible. Klapkowski responded that DEP currently has identified a list of about 500 priority and adjacent opportunity abandoned wells that will serve as the first group of wells that DEP will focus on. Klapkowski explained that there is probably no single approach that will address all abandoned wells, rather it will require multiple approaches and tools to get the job done.

Saunders thanked the Department for recognizing the efforts of CONSOL in the area of proactive well-plugging efforts and explained that prioritization of wells is important; however, it is equally important to incentivize operators to expedite their plugging schedules.

Baldassare asked if the federal legislation allows for funding to be spent on addressing orphan wells that are a threat to public health and safety through stray gas releases, but where such wells are not easily reached, such as when wells are buried under neighborhoods that have developed over time. Klapkowski responded that the Department of Interior has not yet released federal grant guidelines, but this is something the Department is interested in and will be taking a closer look at this matter when such guidelines are published and available for review.

UPDATE ON THE PENNSYLVANIA STATE UNIVERSITY ROADSPREADING OF BRINE STUDY

Perry stated that the Department entered into a contract with the Pennsylvania State University (PSU) to study the environmental effects of use of conventional brines. As part of this study, PSU constructed artificial roadbeds using aggregate from the northwest section of Pennsylvania where the use of brines has been applied to dirt and gravel roads by municipalities. Untreated conventional brines and brines treated to high standards are used by PSU in this study. Fresh water is also used as a control agent. The study simulates a 2-year/24 hour rain event and the run-off from the artificial roadbeds are

measured. This study began on about May 2020 and was to be completed by July 2021; however, due to the impacts of COVID and certain laboratory constraints, PSU estimates that the study will be completed around December 2021.

Perry stated that the Department intends to consider other studies that have been conducted such as the “efficacy study” conducted by PSU, whereby various brines were compared to commercial products. The Department is taking a responsible approach to consider the efficacy and potential environmental impacts of the use of brines in roadspreading activities to determine whether it is warranted to develop future regulations or perhaps a beneficial use permit, if appropriate. Perry stated that any future action by the Department to consider the use of brine in roadspreading operations will be subject to extensive public comment.

Walentosky asked if this topic will be included on the meeting agenda for the December TAB meeting, and Perry responded that the Department intends to revisit this topic when the study is completed by PSU. Perry stated that it is his understanding that PSU intends to make the study available to the public on its website when completed. Walentosky stated that he would be interested in TAB to receive a briefing from the PSU professors and staff who conducted this study. Perry said he would follow up with PSU about this request.

Brantley stated that she thinks the roadspreading of brines is not a good practice, but she said that there is no scientific evidence that groundwater has been adversely affected by this practice. Brantley stated that there is evidence that the general practice of de-icing roadways using commercial products has negative impacts to surface waters.

2020 OIL AND GAS ANNUAL REPORT

Wallace provided a verbal update to TAB members of the content and general trends that are outlined in the DEP 2020 Oil and Gas Annual Report. In 2020, about 7.1 trillion cubic feet of natural gas was produced from unconventional gas wells in Pennsylvania; the largest amount of natural gas produced in a single year, to date. Wallace stated that this report and prior annual reports are available to the public on the DEP website.

2021 MID-YEAR PROJECTIONS: NUMBER OF WELL DRILLING PERMITS ISSUED AND NUMBER OF WELLS DRILLED

Wallace reported that from January 1, 2021 through September 2021 the Department issued 156 conventional well drilling permits and 525 unconventional well drilling permits for a total of 681 well drilling permits issued in 2021, to date. This puts the trend on pace for the issuance of about 900 total permits through the end of December 2021. Last year in 2020, the Department issued about 1,000 total permits; however, the number of permits received in 2021 has trended downward, which has affected the number of permits issued.

As for wells drilled, there were 82 conventional wells drilled and 323 unconventional wells drilled from January 1, 2021 through early September 2021. During this same period last year, there were 24 conventional wells drilled and 337 unconventional wells drilled. The number of conventional wells drilled has increased while the number of unconventional wells drilled has stayed about the same.

NEW BUSINESS

Yoxtheimer opened the floor to TAB members for new business. There were no suggested new business topics from TAB members, so Yoxtheimer reminded the board that an alternate meeting date in December should be selected due to a schedule conflict with a meeting recently scheduled by CDAC.

The TAB members considered three alternate dates including November 30, December 1, and December 8, 2021.

Walentosky made a motion to select December 8 as the alternate meeting date and Kaal seconded. The board voted unanimously to change the meeting date in December to December 8.

ADJOURNMENT

Yoxtheimer thanked the board members for actively participating in the meeting and announced the adjournment of the meeting at about 1:40 pm.