

MEETING MINUTES

Oil and Gas Technical Advisory Board Meeting

June 25, 2025

TAB MEMBERS PRESENT

Voting Members: Fred Baldassare, PG, Casey Saunders, PE, Amanda Veazey, Kimberly Kaal, CPG, PG

Non-voting Advisors: Not present

DEP STAFF PRESENT

Kurt Klapkowski, Kris Shiffer, Dan Counahan, Don Hegburg, Joe Kelly, Stephen Brokenshire, Andy Klinger, Myron Suchodolski, Josh Neyhart, Todd Wallace, Nic Pistory

CALL TO ORDER

A hybrid 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 and also via Microsoft Teams. This meeting was open to the public.

Klapkowski called the meeting to order at about 10:00 a.m. and Wallace conducted a roll call. Klapkowski stated for the record that Dr. David Yoxtheimer accepted a position with the Pennsylvania Game Commission, so he resigned from TAB following the March 20, 2025 TAB meeting. Klapkowski acknowledged the outstanding contributions that Yoxtheimer made during his 10 years of service as a TAB member. The four active voting TAB members were present at the June 25 TAB meeting; resulting in a quorum. Dr. Brantley and Walliser were not present at the June 25 TAB meeting.

Wallace informed individuals in the meeting room and on the Microsoft Teams meeting that this meeting is recorded in its entirety. He stated that in accordance with the state Wiretapping and Electronic Surveillance Control Act, 18 Pa. C.S. § 5703, individuals participating in this meeting convey their implied acceptance and consent to be recorded.

Wallace discussed the following three housekeeping matters: discussed the statutory requirements for individuals who are eligible for appointment to TAB, explained that TAB will need to consider a voting member to be elected to serve as chair of TAB due to the resignation of Yoxtheimer, and suggested that members of TAB should consider identifying an individual to serve as their alternate should the member be unable to participate in a future meeting. Wallace agreed to coordinate with the Department of Environmental Protection (DEP) counsel and the DEP Policy Office to determine what eligibility criteria might, or might not, be applicable to alternate members.

APPROVAL OF MEETING MINUTES

Wallace asked board members if there was a motion to accept the March 20, 2025 draft TAB meeting minutes. Saunders moved to accept the minutes as presented and Baldassare seconded. The meeting minutes were approved unanimously by individual voice vote.

PUBLIC COMMENT

Wallace stated that one individual, Nathan Eachus, a concerned Luzerne County citizen, registered in advance of the TAB meeting to provide comment. Wallace invited Eachus to provide comment to the board.

Eachus stated he has serious concerns about how fossil-fueled data centers and industrial pollution are threatening Pennsylvania's climate, water, and public health and touched on a couple of example situations. Eachus requested TAB to publicly assess emissions from fossil-powered data centers; engage local communities, especially those already overburdened by pollution; and educate on how data centers can pollute air, strain water, and deepen climate vulnerability unless strict environmental safeguards are in place.

Eachus also discussed other industry segments that he stated contributes to climate change. He stated that DEP and TAB should use the DEP Environmental Justice mapping tool as a decision-making tool, to connect public health risks, legacy pollution, and cumulative impacts when reviewing permit decisions.

WELL DEVELOPMENT PIPELINES

Counahan stated that this topic was placed on the agenda to receive feedback from DEP about the status of well development pipelines pursuant to the oil and gas regulations at Chapter 78a.68b. In particular, TAB is interested to know about the number of well development pipelines that are installed in Pennsylvania and the nature and extent of releases from such well development pipelines. Counahan stated the DEP does not track this specific information and acknowledged there have been some spills at well development pipelines. Counahan stated that DEP responds to releases at well development pipelines and ensures such releases are remediated under the oversight of the DEP Office of Oil and Gas Management.

STATUS OF WELL SITE RESTORATION FORM (OG-75)

Kelly reminded TAB members this topic was brought up during a prior Well Plugging Subcommittee meeting where it was suggested that there is some confusion as to when certain portions of the form should be filled out to reflect "post-drilling" versus "post-plugging" activities. Kelly stated the form is being revised and will be posted to the DEP website when completed. Saunders asked if the form will be shared with TAB members or industry representatives for input. Saunders also stated that though the form applies mainly to conventional wells, unconventional operators often plug conventional wells

and could provide some good insights into this matter. Kelly explained that the form is nearly completed, but he would consider reaching out to some industry representatives for some feedback.

STATUS OF PREPAREDNESS, PREVENTION AND CONTINGENCY (PPC) PLAN REVIEWS

Kelly reported that since January 2024, DEP has received 200 PPC Plans of which 30 were reviewed and accepted, 110 were reviewed and returned and 60 are currently under review. Kelly acknowledged the efforts of DEP Oil and Gas employees Stephen Brokenshire and Kevin Maskol who have had responsibility for the review of all PPC plans received to date and for also administering training sessions for both DEP staff and oil and gas operators.

UPDATE ON INFRASTRUCTURE INVESTMENT AND JOBS ACT (IIJA) AND MATCHING GRANT AND METHANE EMISSION REDUCTION PROGRAM (MERP)

Shiffer provided a comprehensive update to TAB members regarding the current status of the IIJA-related grants and the MERP. Shiffer reported that five contracts have been let that will result in 51 wells to be plugged. Two of the contracts are to respond to emergency plugging projects.

Veazey asked about the nature of the EPA contract to plug wells and Klinger reported that the EPA contract is funded via an MOU between DEP and EPA and there is only one more well to be plugged using available funding of about \$40,000.

Shiffer updated TAB on the status of the Orphan Well Plugging Grant Program, Methane Emission Reduction Program, Multi-professional Services Request for Proposal, and the contract with Harrisburg University and the Indiana University of Pennsylvania regarding the locating of undocumented oil and gas wells by digitizing and georeferencing historic well records.

TAB WELL PLUGGING SUBCOMMITTEE UPDATE

Hegburg stated that the Well Plugging Workgroup was established to address oil and gas well plugging issues and challenges faced by DEP and the oil and gas industry. The workgroup is comprised of DEP and oil and gas industry stakeholders. Several meetings have occurred since May 2024.

Plugging requirements for conventional and unconventional wells are outlined in Chapters 78.91/78a.91 through 78.98/78a.98 and vary based on well type. The primary requirement when plugging an oil or gas well is to plug the well in a manner that prevents the vertical flow of fluids or gas within the well bore. This is accomplished by cleaning out the well and setting a cement plug or alternatively approved plugs or method across all oil, gas and water bearing formations. Cleaning out the well refers to the removal of

all retrievable casing, production strings and debris and can be the most difficult and time consuming part of well abandonment.

The regulations allow plugging to “attainable bottom” when the operator has demonstrated to DEP that they are unable to reach total depth after making a “reasonable effort” to clean out the well.

The primary concern raised by industry stakeholders and the focus of the workgroup meetings has been to achieve consistency in DEP’s attainable bottom decision making process when plugging oil and gas wells. Industry stakeholders proposed an attainable bottom concept for DEP’s consideration that was discussed at the May 7, 2024 plugging workgroup meeting. The proposed concept presented to the workgroup is as follows: *“Once the operator has cleaned-out the well to at least 200 feet below the coal protective casing or surface casing, whichever is deeper, and an additional 100 feet of the wellbore cannot be cleaned-out within one, 8-hour shift, the DEP inspector will be notified that a reasonable effort has been made and the minimal attainable bottom depth will be considered reached. A cement plug of at least 50 feet will be set at the minimal attainable bottom of the wellbore. After sufficient time has elapsed, the depth and efficacy of the plug will be confirmed, and the remaining wellbore will be plugged with a solid column of cement to surface.”*

DEP staff provided comments expressing concerns over a set timeline to define reasonable effort due to the varying well types, varying subsurface conditions and need to ensure that the plugging contractor has utilized the proper equipment and technique to clean out the well. DEP proposed to develop a Standard Operating Procedure (SOP) in lieu of the timeline concept to improve consistency with the decision making process. DEP presented a draft attainable bottom SOP to the workgroup on March 11, 2025. Industry members provided comments on June 13, 2025 that were discussed at the June 18, 2025 workgroup meeting. The comments were minor with the exception of adding plugging scenarios as an attachment to the SOP. DEP staff have not provided formal comments at this time, but it suggested at the meeting to move scenarios to the DEP Frequently Asked Questions (FAQ) page. The industry workgroup members agreed to this recommendation so DEP will review the scenarios, and place the question and answers on the FAQ page.

Saunders commended DEP for breaking out scenarios into the FAQ document and said despite some difficulties in working through what is deemed “reasonable effort”, the workgroup has made good progress overall. Hegburg said that DEP will make edits to the SOP based on comments received.

TYPE 1L CEMENT WORKGROUP UPDATE

Hegburg reminded TAB members that cement manufacturers are moving away from the production of traditional cement blends to Type IL cement, also known as Portland Limestone Cement (PLC). The manufacture of PLC uses different percentages of limestone that result in less generation of carbon dioxide in the manufacturing process

and carbon dioxide emissions across the nation could be reduced 8-10 percent when the cement industry fully switches to these “Low Carbon Cements”.

Type 1L cement is now widely used in the construction industry in place of traditional cements and Type 1L cement is currently accepted by nearly all departments of transportation throughout the United States. The use of 1L cement in the oil and gas industry, however, does not appear to be standard at this time.

DEP has received requests for the use of Class L, another Low Carbon Cement, and approved the use of Class L cement in the construction and plugging of oil and gas wells on May 13, 2021 after determining this cement satisfied regulatory standards.

DEP reviewed Type 1L cement and was prepared to follow a similar approval route for use in plugging only but after receiving feedback at the TAB meeting and further review of DEP regulations, it decided to establish a TAB workgroup to determine if Type 1L cement can be used for oil and gas activities.

Based on DEP’s analysis and advice obtained from the workgroup members, DEP attempted to determine the basis for the criteria that define cement in Chapter 78.1 (related to compressive strength and permeability and more specifically the .01 md value for permeability). Hegburg explained that the American Petroleum Institute (API) had a test method for cement permeability in 1989 but removed the test in current standards. The historic test specification by API was a relative permeability test using water.

Based on a review of the DEP regulations coupled with input from the cement workgroup the following was determined:

1. Type 1L cement cannot be used for surface and coal protective strings because it is not an ASTM International C 150, Type I, II or III Standard or API Specification 10 cement.
2. Type 1L cement may be used if the end user has confirmed that the cement used for their well meets the compressive strength and relative permeability standard defined in Chapters 78.1 and 78a.1.
3. DEP will not require operators to provide permeability test data for traditional cement blends covered under ASTM International C 150, Type I, II or III Standard or API Specification 10 cement. The other specifications and tests associated with these standards will suffice.
4. Operators should be prepared to provide documentation that Type 1L cement meets the definition in Chapter 78.1 and 78a.1 if used. Understanding that PLC blends often have varying limestone concentrations, DEP recommends testing cement at the manufacturers recommended ratios (densities). Testing data may be provided through the manufacturer provided data or by the end user, particularly when mixing cement at different water/cement ratios or with other additives.
5. DEP will verify that the type of cement is noted on plugging certificates.
6. Regulatory improvements addressing cement will be considered and will be the focus of future workgroup meetings.

DEP CONSISTENCY – PERMITTING, INSPECTIONS AND ENFORCEMENT

Counahan stated that ensuring consistency in the way the oil and gas program is administered and implemented throughout the DEP District Oil and Gas offices has been a longstanding focus of the Office of Oil and Gas Management. The DEP oil and gas program has developed many Technical Guidance Documents, SOPs, FAQ documents and training sessions to improve program consistency. In the 2018-19 timeframe the Office of Oil and Gas Management reorganized its permitting offices that resulted in a linear chain of command organizational structure rather than a decentralized structure. This has improved the consistency and management of the way oil and gas permits are reviewed.

WELL PLUGGING – FUTURE NEEDS

Shiffer reported that from calendar year 1989 to 2023, DEP has expended on average \$1.2 million per year. Beginning in 2012 through 2024, DEP averaged 27 wells plugged per year. Shiffer stated that current levels of funding are not sufficient to address the magnitude of the problem of plugging given more than an estimated 300,000 undocumented wells and the approximately 28,000 documented abandoned and orphan wells. DEP needs sustained state funding with less hurdles and greater certainty than federal funds currently provide.

The first step is to stop wells from becoming abandoned in the first place. Shiffer explained that the Office of Oil and Gas Management is considering various alternative financial assurance options and tools. One example would use the Underground Storage Tank Indemnification Fund as a model. Another possibility could include a program that would leverage carbon credits to help plug wells. Shiffer stated that DEP is also looking at how other states are approaching this matter.

DIGITAL ACCESS TO OIL AND GAS RECORDS

Shiffer stated that the Office of Oil and Gas Management has made an astounding amount of oil and gas-related information and data available to the public on the DEP website. This information and data includes, but is not limited to, things like oil and gas mapping tools, eFACTs data layers, farmline maps, ePermitting and permit data, emergency response data, well logs, completion reports, well plugging reports, production and waste reports, mechanical integrity assessment data, inspection reports, rulemakings, Infrastructure Investment and Jobs Act project information, Survey 1,2,3 inspection reports, etc.

Shiffer said that although much information is available on the DEP and Oil and Gas website, it is not always easy to find; especially to someone who is unfamiliar with the website and the location of all these data elements. Shiffer reported that something the Bureau of Oil and Gas Planning and Program Management has done recently is reclassify a vacant Program Analyst 1 position to a Program Analyst 2 position and one of the

responsibilities of this position will be to consider how the oil and gas program can make information available to the public in a more effective manner.

CLASS II DISPOSAL WELL UPDATE

Counahan provided an update to the TAB members on the current status of Class II Disposal Wells in Pennsylvania. Counahan reported that as of June 17, 2025, there are no Class II Disposal Well permit applications under review within DEP.

On November 26, 2024, Penneco submitted a Class II Disposal Well permit application to DEP to convert an existing well into a waste disposal well (aka, Sedat 4A well). The well was to be located in Plum Borough, Allegheny county and was to be drilled into the same formation as Penneco's Sedat 3 well that was permitted in 2020. In January 2022, the Plum Borough Zoning Hearing Board (ZHB) gave its initial approval for the well. This decision was appealed to Commonwealth Court, which ordered the ZHB to reconsider its decision and consider whether additional requirements to protect public health, safety, and welfare should apply. The ZHB reconsidered and imposed additional distance restrictions, which the well now cannot meet related to a property line and a structure. Penneco then applied for a variance, and after a series of hearings, the ZHB denied Penneco's variance request. Penneco intends to appeal the ZHB decision.

Penneco agreed to withdraw the application and will re-submit pending the results of the appeal. The application was withdrawn on June 17, 2025.

PRODUCED WATER MANAGEMENT PRACTICES UPDATE

Klapkowski explained that the primary disposition of oil and gas produced fluids that are generated in Pennsylvania is reuse and recycling for reuse in hydraulic fracturing at other well sites. When produced fluid cannot be effectively reused, it is typically disposed in Class II Disposal Wells. There are not many such wells in Pennsylvania and much of the disposal occurs at Class II Disposal wells in neighboring states. Klapkowski stated that DEP is not currently authorized to administer the EPA Class II Disposal program in Pennsylvania, but it intends to pursue federal primacy of Class VI wells (carbon sequestration) and perhaps Class II Disposal wells and Class II Enhanced Recovery wells.

Klapkowski informed the TAB members that EPA recently released a "Budget in Brief" document related to the federal fiscal year 2025-26 and in that document EPA states it intends to revisit the federal wastewater regulations related to oil and gas development and beneficial reuse.

NEW BUSINESS

Klapkowski asked the TAB members and DEP representatives if there was any new business to be considered by the board. Saunders stated that other than the business of electing a new TAB chairperson as a result of the resignation of former chairperson

Yoxtheimer he did not have any new business to report. No other TAB members suggested new business.

ADJOURNMENT

Klapkowski asked for a motion to adjourn the meeting. Veazey made a motion and Kaal seconded. The motion passed unanimously, and the meeting was adjourned.