

MEETING MINUTES

Oil and Gas Technical Advisory Board Meeting

June 13, 2024

TAB MEMBERS PRESENT

Voting Members: David Yoxtheimer, Ph.D., PG (Chair), Fred Baldassare, PG, Kim Kaal, PG, CPG, Casey Saunders, PE, Jeffrey Walentosky, PG

Non-voting Advisors: Susan Brantley, Ph.D.

DEP STAFF PRESENT

Kurt Klapkowski, Kris Shiffer, Todd Wallace, Joe Kelly, Ann Mathew, Bill Walsh, Myron Suchodolski, 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 opened the meeting with introductions of Pennsylvania Department of Environmental Protection (DEP) staff and a roll call of the TAB members.

Klapkowski also informed the individuals in the meeting room and on the Microsoft Teams call that this meeting is recorded in its entirety. Klapkowski 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.

APPROVAL OF MEETING MINUTES

Yoxtheimer asked TAB members if there were any comments or suggested edits to the meeting minutes and called for a motion to approve the meeting minutes of the March 19, 2024 TAB meeting. Walentosky moved to accept the minutes and Saunders seconded. The meeting minutes were approved unanimously.

PUBLIC COMMENT

Yoxtheimer asked the DEP if any members of the public registered to provide comment. Wallace responded that one individual named Ms. Marci Michalski registered to provide comment at today's meeting.

Ms. Michalski stated that she was previously employed in the oil and gas industry. She stated that older conventional wells that could be converted to Underground Injection Control (UIC) wells were “shot with dynamite” and it’s possible that could have opened potential pathways and veins for migration of fluids stored in UIC wells. She stated that produced waters and brines can contain Volatile Organic Carbons and flowback fluids contain chemicals. Finally, Ms. Michalski stated that the Area of Reviews for UIC Class II wells (the plugged wells that have plugging certificates) need serious review for what went down the hole for plugging and the distances from the UIC wells. The consideration to put pressure from injection and possible communication with the plugged wells and the stability of the plugs would be a tremendous concern. She asked the DEP representatives to protect Pennsylvania residents.

POTENTIAL FOR BRINE MIGRATION FROM PERMITTED CLASS II UIC DISPOSAL WELLS

DEP reported that a representative of the U.S. Environmental Protection Agency (EPA) was unable to participate in today’s TAB meeting due to a schedule conflict; therefore, Tom Donohue discussed this topic from the perspective of DEP.

Donohue reminded TAB that the EPA currently has primacy of the UIC Program in Pennsylvania and their review involves the subsurface and protection of Underground Sources of Drinking Water (USDW). DEP conducts a review of the information that is submitted to EPA. DEP also considers surface-related aspects and reviews the Erosion and Sedimentation Plan and the Control and Disposal Plan.

DEP’s authority for its review comes from the Oil and Gas Act, 25 Pa. Code § 78.18, and 25 Pa. Code § 91.51 which prohibits the disposal of wastes into underground horizons unless the disposal is for an abatement of pollution and the applicant can show by the log of strata penetrated and by the stratigraphic structure of the region that it is improbable that the disposal would be prejudicial to the public interest and is acceptable to DEP.

EPA sets an Area of Review (AOR) around the well that DEP uses in its review. The AOR is set by federal regulation and is typically ¼ mile, or can be determined by calculating a Zone of Endangering Influence (ZEI), where the injection pressure may cause the migration of injected or formation fluid upwards into an USDW. If the ZEI is larger than the ¼ mi. AOR, DEP uses that in its review.

As part of DEP’s review, it considers potential migration pathways via a review of available geophysical logs and drilling logs to look for confining layers that could prevent injection fluids from migrating upwards into the fresh groundwater. The review also looks for gas/oil wells that penetrate the injection formation within the AOR that could transmit fluid. Structural geologic features such as mapped faults and lineaments within the AOR that could transmit fluid are also searched for. Finally, DEP reviews the mechanical integrity of the well to determine how effectively it is cased and cemented.

Injection wells that are permitted by DEP are subject to Section 3218 of the Oil and Gas Act and Section 78.51 of the Pennsylvania Oil and Gas Regulations. A well operator that affects a public or private water supply by pollution or diminution must restore or replace the affected supply with an alternate source of water adequate in quantity and quality for the purposes served by the supply as determined by DEP. In the event of a spill or release at an injection well site, the operator must report and remediate the release in accordance with DEP policies and regulations.

Yoxtheimer commented that this agenda topic is in response to recent investigations into the migration of brines into producing wells and coming out of conventional wells that are in proximity to UIC wells located in Ohio. There have also been recent situations in the Permian Basin in Western Texas where migration of brines have occurred in proximity to UIC wells. Yoxtheimer stated that given these recent situations, it is helpful to discuss and bring awareness of these situations to help avoid the potential of such risks in Pennsylvania.

Walentosky stated that federal and DEP reviews of UIC well permit applications are comprehensive albeit some portions of the review are duplicative and cause extended permit reviews and might limit the number of UIC wells that are permitted in Pennsylvania compared to neighboring states. Walentosky read a portion of the TAB bylaws that state the statutory purpose of the board. Walentosky stated that there are no known migration cases in Pennsylvania and suggested that future meeting agenda items be more carefully considered in the spirit of the purpose of TAB.

Brantley asked how it would be known during the review of UIC disposal wells if early methods to develop oil and gas wells might have included the use of dynamite as stated during the public comment period. Klapkowski responded that federal regulations at 40 CFR Part 144 and 40 CFR Part 146 include comprehensive technical requirements for what must be considered during the review of Class II UIC disposal well permit applications. Klapkowski stated that there is also a robust ongoing dialogue among the states and with the Interstate Oil and Gas Compact Commission regarding these matters.

EROSION AND SEDIMENT CONTROL GENERAL PERMIT (ESCGP-4)

Before providing an overview of the status of ESCGP-4, Kelly thanked the Well Development and Surface Activities Division, including Ann Mathew, Shahed Noyon and Soha Shafik who have been working extensively to get the ESCGP-4 documents drafted, updated and ready for posting in the *Pennsylvania Bulletin*. Kelly also thanked the other DEP Programs that have assisted in the review of the document.

The ESCGP-3 was initially published in October 2018. General Permits typically have a lifespan of five years. DEP decided to extend the ESCGP-3 expiration date from October 2023 to January 6, 2025. Kelly shared and discussed the timeline of events of the status and development of both the ESCGP-3 and the ESCGP-4.

Kelly explained that factors that comprise the changes of the ESCGP-3 to the ESCGP-4 include:

- Recent updates to the new Post Construction Stormwater Management Manual;
- Updates to the Chapter 102 Program’s General NPDES Permit, “PAG-02”;
- ePermit Consistency;
- Clarifying language was added regarding the fact that some oil and gas projects do not qualify for general permits (such as projects with Acid Producing Rock); therefore, they require an Individual Erosion and Sedimentation Permit;
- Clarifying language was added to address the Marcellus Shale Coalition lawsuit settlement regarding the site restoration requirements in Section 78a.65 of the Oil and Gas Regulations.

Walentosky commented that the 30-day comment period seems short. Kelly responded that this comment period is consistent with other similar documents. Kelly pointed out that most comments are received in the final two days of a comment period regardless of the length of the comment period. Also, the PAG-02 has already been published for comment.

Walentosky asked what challenges DEP faces as part of the transition to ESCGP-4. Kelly responded that inspector qualifications could be an issue, but DEP will offer the necessary training and will also be training its employees.

UPDATE ON INFLATION REDUCTION ACT (IRA), METHANE EMISSION REDUCTION PROGRAM (MERP) GRANT

Shiffer provided an update on the IRA MERP grant and reminded TAB that on May 14, 2024, DEP was awarded about \$44.4 million. Ten percent of the funding will offset administrative costs and the remaining 90 percent will fund a grant program.

The grant program will target the plugging of marginal conventional wells (MCW) and will offer grants to owners of both less than 10 such wells and those with more than 10 MCWs. The grants will be in the amount of \$20,000 to plug wells less than 3,000 feet and \$35,000 for wells that are more than 3,000 feet.

Klapkowski emphasized that this will be a competitive grant program and there will be a 60-day window for individuals to submit applications.

Brantley asked if methane monitoring will occur before and after the plugging of wells. Shiffer responded that as part of the application process the applicant must test for the presence or absence of methane. If methane is detected, then the methane must be measured and quantified. Klapkowski stated that the U.S. Department of Interior (DOI) released a methane quantification guidance document. Shiffer stated that DEP is also developing methane quantification guidelines and that document will need to be approved by the DOI.

INFRASTRUCTURE INVESTMENT AND JOBS ACT (IIJA) UPDATE

Shiffer provided an update of the status of the IJJA Initial Grant and Formula Grant, Pennsylvania was awarded the maximum award of \$25 million via the Initial Grant and is using 90 percent of these monies to plug about 226 orphan and abandoned wells and the remaining 10 percent will pay for administrative costs. The deadline to complete the plugging work under this grant is December 31, 2024, and DEP is ahead of schedule and should finish sometime this fall.

Pennsylvania was informed that it is eligible to receive a total of about \$300 million in IJJA Formula Grant funding and will receive about \$76 million in the first Phase of this grant. The Formula Grant monies will be used to pay for the plugging of orphan wells and DEP will allocate a minimum of 20 percent toward an Orphan Well Plugging Grant (OWPG) Program. Unlike the MERP grant program, the OWPG will be awarded on a first-come first-served basis. Information about this grant program is available to the public on the DEP Oil and Gas website and two in-person training events will be offered. Finally, DEP will use a portion of the Formula Grant to fund “Request for Proposals” to pay for the locating of abandoned wells, the plugging of wells, the remediation of well sites and methane quantification.

Klapkowski mentioned that DOI has not yet awarded the Formula Phase 1 grant to Pennsylvania, but it is expected to be released soon. Also, the DOI will soon be publishing the Grant Guidance for the next phase of the Formula Grant and it has been suggested that DOI might allow states to apply for the full remainder of the Formula Grant in the next round (Phase 2), but that remains to be determined.

Saunders asked when and where the two in-person training events will occur. Shiffer responded that these trainings are still under development but will be announced.

Brantley commended DEP on the success of the implementation of the IJJA Initial Grant and asked how DEP was able to successfully implement this program. Klapkowski explained that there was a very tight timeline required by DOI for states to award all of the funding. Klapkowski said that the contractors stepped up to apply for the plugging contracts and plug the wells quickly so they would be in a position to apply for the plugging of well under future contracts. Finally, Klapkowski said that the DEP staff were prepared and ready to move quickly.

WELL PLUGGING COMMITTEE REPORT

Walentosky recapped some of the work leading up to the present status. The Well Plugging Committee that was established by TAB in September 2023 met on December 7, 2023 and February 22, 2024. The committee has grown to about 45 members of which about half are DEP staff. To facilitate a more focused discussion and action-oriented approach, a smaller subcommittee of about nine individuals was formed to focus on the issue related to the topic of reasonable efforts to determine attainable bottom related to well plugging. The subcommittee met on March 27, 2024 and April 30, 2024 and developed a draft concept document over the course of these meetings. The draft concept

document includes a statement of purpose, procedures based on the depth of a well, a pre-plugging schedule, description of measures and level of effort to be taken to complete plugging work and suggested communications between DEP, operator and plugging contractor.

The draft concept document was presented to the full committee at a meeting in Clarion on May 7, 2024. The draft concept document was then provided to DEP for review and use.

Walentosky thanked the efforts of TAB member Saunders who played an instrumental role and also DEP staff who actively participated in the process. Saunders added that the draft concept document was intended to help streamline the current process to enable plugging to occur as quickly as possible.

Shiffer added that there are two IJIA Regulatory Improvement Grants (RIGs) on the horizon that tie into some of the work of the committee and other topics being discussed during today's TAB meeting. Specifically, one of the RIGs will focus on the strengthening of plugging standards and procedures to ensure wells are plugged in an effective manner. The other RIG focuses on financial assurance and alternate funding for orphan well plugging programs. The federal guidance has not yet been released, but these grants will likely dovetail into this type of work.

UPDATE: CHAPTER 78, SUBCHAPTER C RULEMAKING (ENVIRONMENTAL PROTECTION & WASTE MANAGEMENT STANDARDS)

Klapkowski reported that the Program's focus has been on other significant priorities including responding to DOI regarding the IJIA Phase 1 Formula Grant application so there are no new developments on the Chapter 78, Subchapter C rulemaking packages to report at this time. The proposed rulemakings are published in the Regulatory Development Calendar and DEP intends to continue to advance these packages as resources allow.

ORPHAN AND ABANDONED WELL TOPICS

Walsh reported that, to date, 85 orphan and abandoned wells were plugged in 2024 and a total of 184 IJIA Initial Grant funded wells have been plugged thus far. Oil and gas inspectors complete approximately one inspection of orphan and abandoned wells each day in an effort to continue to populate data in DEP's orphan and abandoned well database.

Klapkowski offered to discuss the status of unconventional well decommissioning costs and the last agenda topic ("Financial Assurance Strategies to Address Future Well Abandonment") at this point in the meeting. Yoxtheimer agreed.

Klapkowski explained that DEP is working to better understand well plugging cost estimates as it pertains to unconventional wells. Currently, Section 3225 of the Oil and

Gas Act requires the use of collateral and surety bonds as part of a laddered bonding structure to provide monies to pay for the plugging of orphan and abandoned wells in Pennsylvania. The Environmental Quality Board is authorized to adjust the bonding amounts, but has not done so since 2012 so it is unclear whether the current bonding costs are adequate to fund the plugging of such wells.

DEP has not run a contract to plug an unconventional well so it does not have good cost data. Klapkowski explained that determining appropriate costs to plug wells will be accomplished in two steps. First, DEP will coordinate with private partners including oil and gas operators and well plugging companies. DEP has started a dialogue with other states to see what cost data other states have, and DEP will continue to work with federal partners to see what information they have. The second step is to facilitate more discussions about risk management and financial assurance and look at new strategies. One such strategy DEP has used since 1994 is the Underground Storage Tank Indemnification Fund (USTIF) that collects fees from underground storage tank owners and makes monies available to clean up leaking underground storage tanks. Another approach could involve using insurance related tools similar to life-insurance policies to provide funding to plug wells at the time the well has reached the end of its production and useful life.

Walentosky commented that the USTIF model has been an effective one over the years. He asked if DEP has given thought to developing a workgroup to address the issues associated with risk management and financial assurance strategies. Klapkowski responded that this is a good idea since states are dealing with the same issues. DEP intends to continue to move in this direction by inviting others to work together to address this issue.

TYPE 1 CEMENT FOR USE IN WELL CONSTRUCTION

This topic was tabled to the September 5, 2024 TAB meeting since DEP experts on this subject were not able to participate in today's TAB meeting.

NEW BUSINESS

No new business.

ADJOURNMENT

Yoxtheimer asked for a motion to adjourn the meeting. Walentosky made a motion and Saunders seconded. The motion passed unanimously, and the meeting was adjourned at 12:13 pm.