

**MINUTES
OIL AND GAS TECHNICAL ADVISORY BOARD
SUBCOMMITTEE MEETINGS
July 17-18, 2013**

Meetings of the Oil and Gas Technical Advisory Board (TAB) Subcommittees were held on July 17 & 18, 2013, at the Westmoreland County Conservation District Donohoe Center, Greensburg, PA.

TAB MEMBERS PRESENT

Burt Waite, Gary Slagel, Samuel Fragale and Art Yingling.

DEPARTMENT OF ENVIRONMENTAL PROTECTION STAFF PRESENT

Deputy Secretary Scott Perry, Kurt Klappkowski, Elizabeth Nolan, Eugene Pine, Joseph Adams, Joseph Lee, Susan Ghoweri, Simeon Suter, Jessica Shirley and Daniel Lapato.

SUBCOMMITTEE MEMBERS PRESENT

The following individuals attended as members of one or more of the TAB Subcommittees: Emily Krafjack, Vince Straub, Kevin Garber, Jeff Walentosky, Bryce McKee, Ron Ramsey, Nathan Bennett, Jim Erb, Andrew Williams, Jeff Zimmerman, Arianne Proctor, John Walliser, Derek Smoth, Craig Mayer, Jean Mosites, Laura Gianakos, Carl Carlson, John Cass, Matthew Lock, Teresa McCurdy, Ephraim Zimmerman, Matt Hoover, Dawson Lindauere, Charles Olmstead and Sherene Hess.

INTRODUCTION AND OPENING REMARKS – JULY 17, 2013

Burt Waite called the meeting to order at 10:00 a.m. and introductions followed.

The Minutes of the February 20, 2013 and April 23, 2013 TAB Meetings were approved.

WATER SUPPLY RESTORATION STANDARDS

The first topic discussed pertained to water supply replacement standards. This discussion topic was chaired by Burt Waite.

Kevin Garber, on behalf of PIOGA, described the legal issue pertaining to the standard for water supply restoration. Act 13 of 2012 added a new sentence to the water supply restoration requirements which provides that “the Department shall ensure that the quality of a restored or replaced water supply meets the standards established under the Safe Drinking Water Act, or is comparable to the quality of the water supply before it was affected by the operator if that water supply exceeded those standards.” 58 Pa.C.S. § 3218(a).

The proposed rulemaking would change the restoration requirement from “did not meet” safe drinking water standards to “exceeds” or “is better than” those standards. Elizabeth Nolan, DEP Counsel, explained that this change would require a restored supply to meet the better of Safe Drinking Water Act standards or pre-drill conditions if the water supply was better than safe drinking water standards.

PIOGA’s position is that the term “exceeded” means that if a private water supply did not meet Safe Drinking Water Act standards – that it exceeded or was worse than those standards, then the restored supply need only meet the pre-drilling conditions.

Subcommittee members debated the legislative intent and merits of both interpretations.

Scott Perry stated that it was the position of the Commonwealth that Act 13 required restored water supplies to meet the better of Safe Drinking Water Act standards or pre-drill conditions if the supply was better than Safe Drinking Water Act standards.

Subcommittee members discussed the practical implications of DEP's position. These included:

- Does the operator need to restore a supply if it did not cause a violation of the SDWA (e.g., Bacterial/microbial contamination)?
- Does an operator need to provide for long term O&M costs if it voluntarily treats a supply for a parameter that it did not affect?
- Should DEP revise the regulation to reflect its interpretation?
- How should chemistry changes resulting from treatment systems be addressed?
- Should DEP establish a minimum parameter list to test for?

Charlie Olmstead of Chesapeake Energy commented that the definition proposed in Chapter 78 for regional groundwater table is technically incorrect. "Equal to the ambient air pressure" is not applicable when you are evaluating a confined aquifer.

Mr. Olmstead also commented that in the pre-drill survey regulation the phrase "gas well" should be inserted to clarify that the survey pertains to all pre-drill samples collected with relation to a proposed gas well instead of a single water supply sample.

11:20 – Break

Kurt Klappowski explained that the draft regulation is available on DEP's TAB website and explained the process by which the draft rules will be finalized.

Public comment was received by three individuals.

Andy Pollak commented that his neighbor's water well was affected by conventional well drilling. He also commented that conventional well drilling affected his water supply and questioned the parameters that are tested in a water supply investigation.

Kathryn Hilton commented that the absence of state standards for water supplies should not limit the operator's responsibility to restore or replace a supply. She also commented that individuals do not misrepresent the quality or quantity of their water supply. She commented that she supported DEP's interpretation of the water supply restoration standard.

Chad W commented that labs testing water supplies must be independent and accredited. He commented that DEP should verify the accuracy of pre-drill samples.

Scott Perry responded to the comments.

PUBLIC RESOURCES PROTECTION

1:00 – Meeting resumed. The Public Resources Protection subcommittee is chaired by Gary Slagel.

Jean Mosites, on behalf of PIOGA, described the oil and gas industry position on the proposed rule. The issues include what resources are included within the term "public resources"; what the duties of DEP are and what are the duties of the operator with respect to implementing this aspect of Act 13. Industry is

concerned that jurisdictional agencies could make recommendations that become permit conditions and that the process of communicating with jurisdictional agencies will lengthen the permit review process. Industry is also concerned that DEP is interpreting the phrase “critical communities” to include species of special concern. Finally, industry is concerned that the regulation does not provide for adequate criteria by which DEP will determine whether to include permit conditions.

Ron Ramsey of the Nature Conservancy commented that additional public resources such as HQ/EV streams should be added to the list of public resources and that the proposed 200 foot buffer around certain public resources be expanded. He also commented that 15 days is too short a time for agency review and that the phrase “discrete area” is not clear.

Craig Mayer questioned where the criteria for protecting oil and gas property rights are in the regulations.

Ron Ramsey questioned whether DEP considers forest fragmentation and well pad density issues when evaluating E&S permits. He also commented that there are other communities that are part of the heritage program.

Subcommittee members discussed additional resource communities included in the heritage program and the utilization of other processes to meet the requirements of the law.

Craig Mayer commented that the intentions of the regulation are not clear and could lead to increased costs and delays.

Subcommittee members discussed how species are added to the species of special concern list and whether species of special concern should be included as a public resource.

DEP suggested that the subcommittee could propose define “critical communities”.

Nathan Bennett commented that DEP should accept approval through a surface lease by the jurisdictional agency or land manager as satisfying the regulatory requirement.

Subcommittee members discussed potential costs and delays associated with implementing the regulation.

Emily Krafjack commented that the time provided for comment by the jurisdictional agency should be expanded to 30 days.

2:47 p.m. – public comments were received.

Comments included greater protection for public resources by expanding the buffer around public water supplies, greater protection of children and more stringent regulations.

George Jugovic commented that under Environmental Hearing Board caselaw, DEP has a duty to independently consider potential impacts to public resources and cannot rely on the judgment of other agencies.

2:55 p.m. - meeting adjourns.

INTRODUCTION AND OPENING REMARKS – JULY 18, 2013

Samuel Fragale is the chair of the Waste Management at Well Sites Subcommittee and called the meeting to order at 8:01 a.m. Introductions followed.

WASTE MANAGEMENT AT WELL SITES

Derek Smith on behalf of MSC presented the industry perspective on waste management issues. They include: Allowance of a permit by rule for transfer of fluids; expediting reuse of fluids; concerns about the Spill Policy and associated regulatory language; and redundancy in reporting and waste characterization.

Scott Perry explained DEP's goals for addressing odor control at centralized impoundments which are to minimize nuisances and air quality concerns while promoting reuse of flowback.

Industry representatives expressed concerns with limitations on practical rules that enable movement and storage of wastewater.

Scott Perry asked that the Subcommittee provide the parameters that a permit by rule should include. Subcommittee members discussed appropriate parameters. These included basic storage only with a defined limited period of time. Other comments included concern over the movement of flowback through pipeline or via trucks; whether secondary containment will be used; the chemical constituency of the flowback; total volume to be stored; and how often temporary storage at a site could occur.

Subcommittee members agreed to provide criteria for a permit by rule to the TAB via DEP by August 7, 2013.

Subcommittee members discussed odor control and air emission controls at centralized impoundments. John Walliser agreed to provide specific criteria for consideration at the next meeting.

Subcommittee members discussed fencing requirements at centralized impoundments and fencing standards for all support facilities. Emily Krafjak agreed to provide fencing standards for consideration at the next meeting.

Subcommittee members discussed the need for requiring a separation of the pit/impoundment bottom from seasonal fresh groundwater table and the storage of mine influenced water in freshwater impoundments. Subcommittee members discussed criteria for storing degraded sources of water in freshwater impoundments. Industry members commented that there is little incentive to use mine influenced water under the current regulations.

Industry subcommittee members questioned whether the spill policy should be codified in Chapter 78. One concern was the analytical requirements for cleaning up spills of less than a barrel. Kurt Klapkowski explained that this requirement is similar to spills at other industries. Subcommittee members discussed the criteria by which to address small spills and industry members agreed to provide this criteria for the next meeting.

9:35 – 9:45 a.m. – Break

9:45 a.m. – meeting resumes. Laura Gianakos of Shell identified additional waste management issues for discussion. These included the scope of the exemption under the Oil and Gas Act and the Solid Waste Management Act and which processes should be included or excluded from consideration as a waste processing activity that should be evaluated by DEP.

Industry subcommittee members commented on waste characterization processes and the ability to rely on previously conducted studies to characterize future waste streams. DEP's central office Waste Management program should be contacted to resolve this issue.

Industry subcommittee members commented that the characterization required by proposed section 78.58(f) should not be required for wastes that are not going for disposal or at landfills that have permitted staging areas.

Derek Smith commented that DEP should consider the impact of the rules on existing leases.

Laura Gianakos commented on buried tanks. During operation, certification that discontinuation of use should be accepted in lieu of removal of the tank. Other subcommittee members supported removal of such tanks.

Industry subcommittee members discussed the tank vandalism prevention measures in section 78.58 and recommended that the standards be more performance based. Emily Krafjack commented that more access prevention measures should be required at well sites. Industry subcommittee members oppose mandatory fencing requirements for impoundments.

Subcommittee members discussed the inside slope requirements of proposed section 78.56 and the appropriateness of this 2:1 ratio to conventional operators. DEP requested that PIPP provide criteria for an exception to the slope requirement for consideration at the next meeting for small volume pits that are of limited duration.

Emily Krafjak commented on site restoration issues including the ability to reduce the size of the well site, restoring previous drainage swales, and site restoration issues at gathering lines that are impeding previous land uses such as farming.

11:20 a.m. – Public comments received

One commentator questioned how wastewater disposal will ultimately be handled and questioned whether temporary tank storage at additional sites will reduce truck traffic and whether temporary tank storage would affect land use. The commentator also stated that water should be kept within each watershed and commented on waste management and characterization issues.

One commentator commented on proposed section 78.66(b) and whether comingled substances constitute a regulated substance and questioned whether allowing self-assessment by an operator is appropriate. The commentator disagreed with the use of the term “regulated substance.” The commentator discussed the lack of notification of spills to surface owners and said that surface owners should be allowed a conference on alternative waste management forms. The commentator requested that “fresh water” be defined. The commentator commented on seasonal high groundwater determinations, standards for water supply predrill surveys, restoration plans and standards, and defining encapsulation.

One commentator opposed permit by rule for onsite storage but favored promotion of reuse of flowback. The commentator supports use of mine influenced water but opposes storage of such water in freshwater impoundments unless the water met certain standards.

11:40 a.m. – Meeting adjourned.

PRE-HYDRAULIC FRACTURING ASSESSMENT

11:55 a.m. – Meeting resumed. The Pre-Hydraulic Fracturing Assessment Subcommittee is chaired by Art Yingling. The proposed regulation and associated issues were framed from an industry perspective by Carl Carlson on behalf of the MSC. The MSC supports the area of review concepts and the protection of fresh groundwater resources. Issues of concern include evaluation of vertical growth of fractures and the

scope of review. MSC noted that area of review should be larger for unconventional wells than for conventional wells. Consideration of the area of review should be limited to areas where Medina and Oriskany (that is, deep) wells have been drilled.

Andrew Williams of the Environmental Defense Fund identified the following issues: 1) what is the geographic scope of the land to review; 2) what is the substance of the review; 3) what should be reported to DEP and; 4) what steps should be taken to mitigate the risks.

Williams commented that additional assessment should be included in the proposed regulation to consider active well sites. The scope of the review should include public records that address the integrity of the abandoned or active well. The area of the review should be expanded from 1,000 feet to 1,320 feet.

Jeff Walentosky commented and agreed that there is a level of due diligence that is required and its members already evaluate some of these risks already. PIOGA's concerns were that the regulation be a cost effective approaches to managing risk.

Andrew Williams clarified that the 1,320 foot proposal was based on EDF's evaluation of fracture propagation.

Bryce McKee commented that there should be a basis for the scope of the area of investigation which can vary by geographic location. McKee commented that risk evaluation should also include surface issues and drilling risks in the vertical wellbore. He relayed his work on EPA's hydraulic fracturing study and noted that scientific papers are pending that show that that it is impossible to hydraulically fracture a well from depth to surface even through a fault.

DEP acknowledged the work done to model fracture propagation and the inability for fractures to propagate from depth to surface. Andrew Williams agreed with the statements on fracture propagation but felt that clarity of regulation is important.

Environmental advocates commented that a physical evaluation be required and that wells be plugged prior to drilling. Subcommittee members discussed the merits of this proposal. Specific comments include: the review of available farm line maps is too vague and that outreach to the community is useful as they know where abandoned wells may be. Comments on the questionnaire were: what additional obligations were on the operator after notification and what information would be provided to the landowner. Proof of notification issues were discussed and Williams suggested that a certification of notification be submitted instead of return receipt of service. Carlson commented that engaging in the pre-hydraulic fracturing review process may not be necessary if the proposed well will be located in an area where deeper well drilling has not occurred.

The Subcommittee discussed whether a pre-hydraulic fracturing review should be conducted for deep shale wells in areas where other deep well drilling is not known to occur. Management of notification issues and evaluation of abandoned well integrity were discussed.

Potential geologic hazards and their potential risk were discussed by subcommittee members.

Public comment suggested that a legal notice be published in the newspaper. Emily Krafjak commented that informational notices in newspapers were superior.

Williams suggested that geologic hazard evaluation requirements could be addressed through a self-certification process and questioned what seismic evaluation is done prior to leasing or drilling. Carlson explained the cost and process of 3-D seismic and its limitations on evaluating shallow geologic conditions.

Monitoring and remediation were discussed. Carlson supported addressing abandoned wells that are altered during hydraulic fracturing. Subcommittee members discussed whether plugging should occur prior to hydraulic fracturing. Walentosky commented that an operator would not drill a well where it was likely that communication would occur. Williams commented that plugging prior to hydraulic fracturing should occur. Nathan Bennett commented that plugging a well could result in environmental harm that is greater than if plugging was not attempted.

The subcommittee discussed the need to proactively address hazards with respect to risk and the benefits of mitigating risk. The subcommittee discussed the merits of identifying and monitoring operating wells that penetrate the formation to be stimulated.

2:10 p.m. – public comment was received. The commentator requested that area of review for pre-hydraulic fracturing be expanded.

2:20 p.m. – Meeting adjourned.

DRAFT