

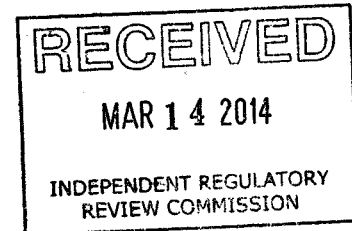


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March 14, 2014

Environmental Quality Board  
Rachel Carson State Office Building, 16<sup>th</sup> Floor  
400 Market Street  
Harrisburg, PA 17105-2301



Via Pennsylvania Environmental Quality Board Regulatory Comment System:  
<http://www.ahs.dep.pa.gov/RegComments>.

**Attention: Pa Bulletin Doc. No. 13-2362, Notice Saturday December 14, 2013, Environmental Quality Board Proposed Rule to Amend Chapter 78**

Dear Environmental Quality Board Members:

Talisman Energy USA Inc. ("Talisman") appreciates the opportunity to comment on the proposed amendments to 25 Pa. Code §§ 78.1-78.404 ("Chapter 78"). Specifically, these comments relate to the December 14, 2013 Notice published by the Environmental Quality Board (the "Board") on the subject of the proposed rule (the "Rule") to update the Pennsylvania Department of Environmental Protection's (the "Department") requirements regarding surface activities associated with the development of oil and gas wells and to address recent statutory changes in the act of February 14, 2012 (P.L. 87, No. 13), codified at 58 P.S. §§ 2301-3504 ("Act 13").

Talisman is an independent upstream oil and gas production company operating in the Marcellus Shale play. It is an indirect, wholly owned subsidiary of Calgary, Alberta-based Talisman Energy Inc. In performing its operational activities, Talisman strives to abide by all federal, state and local regulations, within all of its operating jurisdictions. Whether Talisman is constructing a new facility, operating a well or restoring a site, we strictly follow proven practices in order to minimize our impact on the environment and safely deliver energy resources.

Talisman operates in the Commonwealth and recognizes the Department's authority to regulate unconventional drilling. At Talisman, we value building positive, long-lasting relationships in the communities in which we operate by respecting the environment and our neighbors. Because of this commitment, Talisman is clearly interested in and directly impacted by the proposed Rule.

Talisman appreciates the Board's efforts to address issues raised during the Technical Advisory Board ("TAB") meetings and it believes the proposed amendments resolve many of them. Talisman also commends the Board's focus on performance over process and its appropriate distinction between

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conventional and unconventional operations in the proposed text. We offer the following comments that, we believe, based on our understanding of the Board's intent in the preamble, will further clarify the proposed text and help facilitate implementation of the final rule by the regulated community. This Comment first addresses key areas of interest and general comments on the rulemaking. Specific comments are then presented under the topical headings used by the Department throughout the rulemaking process: permitting and protection of public resources, pre-hydraulic fracturing orphan and abandoned well review, waste management at the well site, and issues beyond the well site. Comments on the amendments to the well reporting section are also included within the Specific Comment section.

## **I. GENERAL COMMENTS**

### **A. The Board Should Further Consider Landowner Rights and Contractual Constraints on Operators in Promulgating Certain Provisions Throughout the Rule**

In general, the Rule should be amended to consider the ongoing relationship between the operator and landowner and the contractual agreements to perform or not perform certain activities on a landowner's property. The relationships between operators and landowners are governed by the terms of lease, easement, and right-of-way agreements that are negotiated between the private parties. Talisman wishes to point out that some of the proposed requirements do not appear to accommodate such contractual constraints. For example, without the right to enter a landowner's property, an operator, such as Talisman, cannot carry out the requirements to visually monitor an abandoned or orphaned well as required by the proposed § 78.73(c). Similarly, a landowner may not want an operator to restore his or her land to approximate original conditions or apply 70% perennial vegetative cover when final restoration is occurring after twenty or thirty years of production and the landowner's needs have changed— often there will be a different landowner entirely. However, the proposed §78.65(4) does not provide the landowner with the flexibility to create an alternative use for the land.

Thus, operators cannot always accommodate contractual rights and one-size-fits-all requirements. Act 13, § 3215(e) requires that the Board balance the potential impact to a public resource and ensuring optimal development of oil and gas resources while respecting property rights of landowners when developing regulatory criteria for the Department to condition a well permit upon under Section 3215(e). Talisman asks that the Board also consider landowner rights in its requirements outside the scope of the well permitting to assure private landowner's rights are accommodated and accounted for.

### **B. Opportunity to Qualify Scope and Requirements for Restoring and Replacing a Water Supply to Support Implementation of the Rule**

Operators should restore or replace water supplies they affect; however, Talisman believes the oil and gas industry should not be tasked with addressing water well contamination unrelated to oil and gas activities. It appears that the proposed language in 78.51(d)(2) deviates from the existing Chapter 78 language and the Department's long-standing position that an operator has to restore affected water supplies to meet the Pennsylvania Safe Drinking Water Act ("PSDWA") standards or to a quality that is comparable to the quality of the water supply before it was affected by the operator, if that water supply did not meet those standards (*See* 25 Pa. Code 78.51(d)(2)). Many Pennsylvania water supplies do not

currently and have not historically met the PSDWA standards (Pennsylvania does not provide private water well drinking standards).

Talisman agrees with TAB's interpretation of the word "exceeded" in Act 13, § 3218(a). This interpretation is that "exceeded" refers to an operator's requirement to restore an affected water supply to its pre-drilling conditions when that water supply did not previously meet PSDWA standards prior to drilling. Further, § 3218(a) of Act 13 requires the Department to assure any restored or replaced water supply meets PSDWA standards or is "comparable to the quality of the water supply before it was affected by the operator if the water supply exceeded those standards." (58 P.S. § 3218) The word "comparable," meaning capable of or suitable for comparison, assures operators and landowners have the flexibility to derive at an approximate equivalent for the affected water supply when that supply did not meet PSDWA standards prior to drilling. The use of this term infers sufficient flexibility is required of the supporting regulation. To help achieve this flexibility and align with Act 13, Talisman proposes the Board rewrite the provision to state: "The quality of a restored or replaced water supply will be deemed adequate if it meets the standards established under the Pennsylvania Safe Drinking Water Act (35 P. S. §§ 721.1-721.17), or is comparable to the quality of the water supply before it was affected by the operator."

**C. Request for Clarification as to Scope of Operator Consultation with Pennsylvania Natural Heritage Program ("PNHP")**

In General, Talisman asks that the Board streamline its use of terms related to species and habitats throughout this section and others to ensure uniformity of interpretation among the Department and the regulated community— especially, when related to obligations of permit applications that relate back to the direction of Act 13 Section 3215(e) related to well permit conditions for public resources. Overall, the proposed provision creates uncertainty about a permit applicant's obligations related to protecting important public resources.

In Section 78.15(d), the Board proposes that operators consult PNHP regarding the presence of a federal or state threatened or endangered species where a well site or access road is proposed. The Rule then goes on to give the Department the authority to determine, based on PNHP data or other sources, if the proposed well site or access road may adversely impact a species or critical habitat. Talisman wishes to note that neither the PNHP Species of Special Concerns Lists nor PNHP's Pennsylvania Natural Diversity Inventory ("PNDI") are defined as tools to find, define, or verify any potential impacts to "critical habitats." Currently, as stated on the PNHP website, the PNHP Species of Special Concerns List system is not used to find, define, or verify any potential impacts to critical habitats, rather it inventories and maintains a list of ecologically significant species and communities. PNHP's PNDI lists potential impacts on resources of special concern, and PNDI offers a means of documenting that it was consulted (*i.e.*, issues a receipt). Thus, the use of this term appears superfluous in the proposed language and it should be deleted. However, if the Board intends "consultation with the PNHP" to mean a search through the PNHP's PNDI system, it could expressly state so in the Rule to assure uniform consultation among operators.

Additionally, the proposed language allowing for the Department to consult "other sources" to determine whether the proposed well site or access road may have an adverse impact should be further

clarified as to set reasonable expectations. To maximize compliance, Talisman recommends including a clear and expressly enumerated list of Department-consulted sources. See related comment on § 78.15(f)(1)(iv) on pg. 8.

**D. The Incorporation of Pivotal Definitions Required for Uniform Interpretation of the Rule**

The proposed Rule should include those express definitions needed for basic understanding and interpretation of the Rule's meaning. The proposed Rule contains a number of definitions and sections of text that refer the reader to a myriad of other Pennsylvania statutes and regulations. Talisman is concerned because this causes the reader to search through multiple documents to find possible definitions within these other statutes and to cross reference and research terms before even being able to understand basic provisions of the proposed Rule. This is not user friendly. The Rule would be streamlined by inserting the appropriate cross references to the specific provisions of the other statutes. Any express terms from other federal or state law or regulation used in the Rule should be copied into the Rule's definitional section, § 78.1. This will avoid confusion in interpreting the details of the provisions and avoid easily overlooked express definitions. For those definitions that are added to the Rule in § 78.1, Talisman proposes some recommendations in its Specific Comments, starting on pg. 5.

**E. Opportunity to Streamline Inconsistent Definitions and Scope of Impacted Oil and Gas Processes Throughout the Rule**

Various provisions, including definitions, of the proposed Rule use the term "oil and gas activities" as a subject for triggering regulatory requirements; however, this term is not expressly defined in Chapter 78 or Act 13. In Talisman's view, the applicability specified for "oil and gas activities" and "oil and gas operations" needs further clarification. In Section 78.1 of Rule, outlining express definitions, "approximate original conditions," "centralized impoundment" and "pit" use the term "oil and gas activities" – yet this term is not defined. It would be helpful if this term was clearly defined, or, if it is meant to be the same as "oil and gas operations," which is expressly defined in the Rule, one term should be selected and used in each instance. Without such clarification, using these definitions in an effective and responsible manner is difficult. See the comment on "oil and gas operations" in the following section of our General Comments.

**F. Need for Clarity on Provision-Specific Effective Dates**

Due to the wide-ranging impact and additional costs of implementing the proposed Rule on oil and gas operators, Talisman asks the Board to clarify the effective date for new requirements throughout the Rule. It is important for the regulated industry to know when specific new requirements will apply. Talisman suggests the Board add the necessary clarifying language to limit the new requirements to new wells and expressly state that wells constructed prior to the determined effective date are grandfathered in for purposes of the new requirements. In summary, Talisman suggests the Board clarify the extent of the proposed Rule's reach to avoid any uncertainty with interested stakeholders.

## II. SPECIFIC COMMENTS

### A. Opportunity to Further Clarify Proposed Definitions

Talisman recommends the following revisions to the proposed definitions in § 78.1:

- 1) **Approximate Original Conditions.** The definition uses the term "original land uses"; however, the term is ambiguous in Talisman's view: Does it mean the most recent land use or the first use of the land ever? Talisman asks that the Board further clarify its intent for this definition See the General Comment on the use of inconsistent use of "oil and gas activities" and "oil and gas operations" on pg. 4.
- 2) **Borrow Pit.** The word "development" could be removed from this definition to avoid the unintended consequence of including all site development activities as borrow pits; thus, requiring unnecessary additional permitting and bonding obligations under the proposed § 78.67. Talisman recommends that the Board rewrite the definition to state: "An area resulting from the earth disturbance activity of excavation of rock, stone, gravel, sand, soil or clay to be used elsewhere for the purpose of constructing or maintaining oil and gas infrastructure. This definition does not include specific well sites or activities otherwise permitted by the Department under the Oil and Gas Act."
- 3) **Centralized Impoundment.** Talisman proposes that the definition expressly exclude freshwater from its scope for the sake of clarity. Further, because the Department's air quality program, not the oil and gas program, is implementing the recently promulgated federal air regulations found at 40 C.F.R. Part 60, Subpart OOOO, any references to air pollution should be deleted from the proposed definitional language as the reference could create confusion. To accommodate these recommendations, Talisman recommends that subsection (ii) be amended to state: "designed to hold fluids or semifluids associated with oil and gas operations, including wastewater flowback and mine influenced water, but not freshwater, the escape of which may result in water or land pollution."
- 4) **Conventional Well.** As what constitutes conventional versus unconventional can vary at any particular time based on resource characteristics, available exploration and production technologies, the economic environment, and the scale, frequency, and duration of production, Talisman suggests the Board base the qualifying language of this definition on what technologies the Board currently believes constitute conventional production, rather than cross referencing to the definition of "conventional formation."
- 5) **Freshwater Impoundment.** The Board appropriately recognized the purpose and scope of a freshwater impoundment in the oil and gas development process. However, the definition states in subpart (iv) that such an impoundment is "constructed for the purpose of servicing multiple wells," which creates unnecessary confusion as a freshwater impoundment can be constructed to service either a single well site or multiple well sites. Talisman supports deleting this phrase.
- 6) **Gathering Pipeline.** To the extent that the Board must use the term "gathering pipelines" throughout the Rule, its definition should be replaced and, therefore, made consistent with the PHMSA definition to ensure alignment with the Department with other regulating agencies at the federal and state levels. "Gathering line" is defined by

PHMSA in 49 C.F.R. § 192.3 as "a pipeline that transports gas from a current production facility to a transmission line or main." Pipeline terms get used interchangeably in common conversation, creating confusion and ambiguity. Thus, it is important to clearly and uniformly define the various types of pipelines in the regulations. See comment addressing § 78.68 of the Rule where Department does not have the authority to regulate some issues related to gathering pipelines on pg. XX of this Comment.

- 7) **Mine Influenced Water.** The proposed definition appears to include all waters impaired by mine drainage. Given this breadth, the definition would include many surface waters throughout the Commonwealth, including sections of major rivers, such as the Allegheny, Monongahela, Youghiogheny and West Branch of the Susquehanna, some of which are widely used for public water supplies. The definition seems overly broad. Storage and use of such a broad universe of waters should not be subject to the special approval requirements of section 78.59b(g). To allow for the beneficial reuse of waters impacted by acid mine drainage, Talisman recommends narrowing the definition to state: "Water contained in a mine pool or a surface discharge of water caused by mining activities that pollutes, or may create a threat of pollution to, waters of the Commonwealth."
- 8) **Pit.** Talisman recommends removing the term "oil and gas activities" from the definition for "Pit" as this term is not defined in Chapter 78 nor its enabling statute. Talisman additionally suggests removing the term "fresh water" from the definition. Talisman recommends rewriting the definition to state: "A natural topographic depression, manmade excavation or diked area formed primarily of earthen materials designed to hold fluids, semi-fluids or solids associated with activities at oil and gas well sites, including, but not limited to, wastewater, flowback, mine influenced water, drilling mud and drill cuttings, on the well site."
- 9) **Regional Groundwater Table.** Subpart (ii) of this proposed definition should read "seasonal high groundwater table," as opposed to "seasonal high water table," for the sake of consistency and clarity throughout the Rule.
- 10) **Regulated Substance.** This proposed definition refers to the definition in Section 103 of Act 2, which was developed to assist those conducting cleanup operations at brownfield sites throughout the Commonwealth. Talisman is concerned that the definition, which includes substances "covered by" six other named statutes, appears overly broad, and when applied to specific proposed sections, creates ambiguity. To provide the needed guidance on how to apply the Board's proposed requirements, it is suggested that the definition be replaced, and therefore clarified, with a definition that contains an express list of substances. In addition, the term should be replaced or removed entirely where the intent of the Rule is better served by a different term. Examples could include: Sections 78.55 (Control and disposal planning), 78.56 (Temporary storage), 78.59c (Centralized impoundments), 78.61 (Disposal of drill cuttings), and 78.64a (Containment systems and practices at unconventional well sites).
- 11) **Water Management Plan.** Talisman asks that the Board specify the purpose of a water management plan in the definition to clarify the expectations and purpose of such a plan. Accordingly, Talisman suggests rewriting the definition to state: "a plan associated with drilling or completing a well in an unconventional formation that helps assure

compliance with the withdrawal limits and use limitation established for that water source.”

**B. Permitting and Protection of Public Resources**

When protecting public resources, the Board, Department and industry must have a thorough mutual understanding of all permit application requirements related to all public resource regulations, and these regulations must be based in law. Talisman appreciates the Board’s efforts to streamline the permitting process and offers the following provision-specific comments to support such efforts.

***78.15(c): Clarify Parent and Subsidiary Compliance History and When a Change is Deemed to have Occurred***

Clarifying the proposed text in Section 78.15(c) will ensure the requested information on compliance history is utilized as an effective and responsible compliance tool. Talisman agrees that the Ownership and Control form need only be submitted once and updated when applicable. Talisman hopes that the Board will consider events that trigger the proposed language of “provide any changes to its (the operator’s) business relationships” to ensure expectations on operator reporting are met. Without clarity on such triggering events, operators will likely continue the practice of submitting an Ownership and Control form with each permit application—generating approximately nine pages of unnecessary filings with each permit application. This appears to be exactly the scenario that the Board is attempting to avoid with its proposal.

***78.15(f)(1)(i)-(iv): Further Clarification on Phrases Used for Notification Requirements Would be Helpful***

The proposed language regarding notifications operators must issue under § 3211(b)(2) of Act 13 could benefit from further clarification. The proposed language of § 78.15(f)(1)(i)-(vi) maintains that if an operator is drilling in or within 200 feet of a publicly owned part, forest, game land or wildlife area; in or within the corridor of a state or national scenic river; within 200 feet of a national natural landmark; in a location that will impact other critical communities (meaning special concern species); within 200 feet of a historical or archeological site listed on the federal or state list of historic places; or, within the case of an unconventional well, within 1,000 feet of a water well, surface water intake, reservoir or other water supply extraction point used by a water purveyor it must provide additional notifications. To ensure proper understanding of these requirements, Talisman recommends the Board provide a definition or additional clarifying language for the phrase “corridor of a state or national scenic river.” Talisman further recommends revising the first sentence and deleting the second sentence of § 78.15(f)(1)(iv) to align the regulation with the language in Act 13, § 3215(c)(4), which refers to habitats of rare and endangered flora and fauna and other critical communities. To create such alignment, it is suggested that the reference to special concern species be deleted from 78.15(f)(iv). See the following comment on “special concern species.”

***78.15(f)(1)(iv): References to the Habitat of a "Species of Special Concern" Should be Deleted to Avoid Potential Confusion with "Critical Communities"***

The proposed Section 78.15(f)(1)(iv) attempts to regulate the habitats of "species of special concern" without clearly delineating the meaning of the term. Operators, like Talisman, will incur an expense in time and resources for processing permit applications with the proposed requirements related to the habitats of such species. To that end, Talisman asks that the Board provide further clarity and distinction between the terms "critical communities" and "species of special concern" (or "special concern species") to reduce ambiguity in how an operator is to comply with the proposed provision.

In maintaining the language from Section 205(c) of the Oil and Gas Act of 1984 ("Act 223") in the enacted Act 13, which expressly included the term "critical communities," it appears the Pennsylvania Legislature did not intend for the amended statutory provision, Section 3215(c), to include the term "species of special concern" or "special concern species." "Critical communities" and "species of special concern" (or "special concern species") are distinct terms. Talisman is concerned because there is no scientific community or agency consensus or express statutory definition from which to garner a meaning of the term "species of special concern" (or "special concern species"). Without such consensus or an established definition, it is difficult to use the proposed provision as an effective compliance tool. The regulated community is left with substantial questions as to how any such list is generated, what criteria are used to generate such a list, and no insight into how the Department will manage the list as it relates to permit conditions. To reduce confusion, Talisman asks that the Board continue its commitment to requiring operators to evaluate potential impacts to "critical communities" as a permit application requirement, set forth in Section 3215 of Act 13. The proposed Section 78.15(f)(iv) should be modified by deleting the reference to "special concern species."

***78.15(f)(2): Consultation with Commonwealth Agencies Managing Public Resources Prior to Submitting a Permit Does Not Address Expedited Permit Process***

The proposed provision does not take into account the need for an accelerated permit. Section 78.16 of the current Chapter 78 regulation states: "[I]n cases of hardship, an operator may request an accelerated review of a well permit application." If the proposed unconventional well for which an operator was seeking a permit was near or on a public resource, the new provision would appear to preclude the operator from being able to request expedited permit review. If the need for an expedited permit review were present, waiting the additional days to reach the Commonwealth would be cumbersome and unnecessary. Talisman asks the Board to revise the proposed language to include a practical method for addressing accelerated permits. Additionally, Talisman suggests that the Board clarify that the public resource agency shall have 15 calendar days to provide written comments to the Department and the applicant.

**C. Pre-hydraulic Fracturing Review of Orphaned and Abandoned Wells**

Talisman sees opportunity for clarifying areas of this section. The State Review of Oil & Natural Gas Environmental Regulations (STRONGER), a national non-profit organization charged with assessing states' oil and gas regulations, reviewed Pennsylvania's oil and gas regulatory program in May 2013 at the Department's request. STRONGER released its report in September 2013 and found that



Pennsylvania's program "is, over all, well-managed, professional and meeting its program objectives." STRONGER specifically commended the Department for its Orphan and Abandoned Well Program. Talisman joins STRONGER in commending the Department for furthering the joint efforts of the regulated community, the public, and the Department with some of the new regulations in this area. Successful new regulations are sustainable and based on available technologies. To that end, Talisman recommends the following provisional comments to the proposed Rule.

***78.52a: Abandoned and Orphaned Well Identification- Improve Area of Review Based on Sound Horizontal and Vertical fracturing Propagation***

The proposed scope of the 1,000 feet of the well bore and along the entire length of the horizontal well bore could be enhanced to better reflect sound horizontal and vertical fracturing propagation. The proposed text requires operators to survey for abandoned and orphan wells in the vicinity of their unconventional well prior to fracturing. Talisman shares the Department's goal of reducing, if not eliminating, the impacts to health, safety, and the environment that an unidentified abandoned well could pose. Another shared goal is reducing the substantial inventory of known abandoned wells in the Commonwealth. In defining the scope of review, the Board should leverage the expertise derived from the available technology to achieve these goals.

The area of review should be precise and limited to an area based on sound horizontal and vertical fracturing propagation, in Talisman's view. It seems appropriate that any wells which appear on the Department's database should be identified, provided their total depth extends below the interval that could reasonably be influenced by hydraulic fracturing. Talisman recommends addressing the vertical isolation distances in the Rule's area of review. To that end, Talisman suggests a vertical isolation distance of 1,500 feet above the zone to be perforated or isolated for hydraulic fracturing in an unconventional well and 500 feet above the zone to be perforated or isolated for hydraulic fracturing in any other well is a reasonable isolation distance that exceeds the normally expected vertical growth of induced fractures.

***78.52a: Abandoned and Orphaned Well Identification- Need for Consolidating Historic Maps and Geographic Information on Oil and Gas Activity***

Before promulgating a rule that utilizes such a broad scope of review, Talisman asks that the Department make all available data easily accessible to the industry from one comprehensive source. Specifically, Talisman suggests that the Department first complete and digitize the Farm Line Map Project and other resources to make them easily accessible before implementing a regulation of this type. Without such a comprehensive source of data on orphaned and abandoned wells, assuring a thorough pre-hydraulic fracturing review on a well-by-well basis will be very difficult for the Department and the regulated community. Operators, including Talisman, do their best to obtain all information regarding potential orphaned and abandoned wells in the vicinity of a planned unconventional well. However, operators remain without a comprehensive source of best available data from the Commonwealth that would aid in the pre-hydraulic fracturing review. Talisman encourages prompt digitization and accessibility of identification resources prior to implementation of a Rule tasking operators with consultation of the same.

Talisman also suggests that the Board consult with the Department on the functional status of the Department's GIS mapping database being developed to house the GIS data submitted by several operators. Successful development and implementation of this project could help support the goals of proposed regulations. Identifying abandoned and orphaned wells before hydraulic fracturing is good standard practice; however, the rule as currently proposed does not provide operators with enough clarity and flexibility to properly identify and plan operations for such wells. The GIS mapping database could serve as a key component to the continued success of the Orphan and Abandoned Well Program.

***78.73: General Provisions for Well Construction and Operation- Clarify Requirements for Monitoring when Land is Inaccessible***

The proposed subsection does not address possible issues of operator inaccessibility to the abandoned and orphaned wells. Proposed subsections (c) and (d) require operators to visually inspect orphaned and abandoned wells identified under proposed § 78.52a during hydraulic fracturing activities that likely penetrate a formation intended to be stimulated during stimulation activities. However, access may be denied to property on which abandoned and orphaned wells are located – making it impossible for operators to comply with the provision. Talisman asks that the Board rewrite this section to address an alternative for operators when surface access is not achievable. See comment on landowner rights, pg. 2.

***78.73(c): General Provisions for Well Construction and Operation- Delete or Clarify Ambiguous Language for Visual Monitoring of Identified Orphaned or Abandoned Wells***

Talisman requests that this provision be further clarified. Subsection (c) proposes to require operators to notify the Department of "any changes" to those wells and to "take action to prevent pollution of waters of the Commonwealth or discharges to the surface." The requirements for visual monitoring, what constitutes a change, taking action, and prevention are ambiguous. Without specification as to what constitutes a "change" and appropriate "action" to "prevent" in terms of scope and timing, Talisman is concerned that the proposal will likely result in the unintended consequence of further causing unreasonable burdens and distracting from the shared objective of the Board and the regulated community of mitigating impacts from the existing landscape of oil and gas wells in Pennsylvania.

Talisman asks that the Board further specify what is meant by these phrases in the revised provision while considering the potential options available to an operator who observes an actual threat of harm of surface discharge or potential for pollution to the waters of the Commonwealth. Talisman recommends rewriting the subsection to state: "(c) Wells in the vicinity of a well that is hydraulically fractured that is identified pursuant to § 78.52a(c) and can be located on the ground using reasonable efforts shall be monitored during periods of hydraulic fracturing, provided that surface access to such wells can be obtained. Such monitoring shall include a visual inspection of the well at least every four hours, or following each stage of hydraulic fracturing, whichever is shorter, or other monitoring arrangements approved by the Department. The operator shall immediately notify the Department of any permanent change to the well being monitored and take action to prevent pollution of waters of the Commonwealth or discharges to the surface."

***78.73(d): Plugging an Altered Orphaned and Abandoned Well- Specify What Constitutes Alteration***

The Rule should specify that alteration means an operation which changes the physical characteristics of a well bore. This section requires an operator who "alters" an orphan well during hydraulic fracturing to plug it. Section 3203 of Act 13 defines alteration as an operation which changes the physical characteristics of a well bore. While hydraulically fracturing into a nearby unknown orphaned or abandoned well may cause fluids to appear at the surface, hydraulic fracturing does not usually result in alteration of the well (*i.e.*, changing the physical characteristics), as that term is defined in § 3203. Consequently, Talisman suggests the Board modify the language to address such a situation or delete the subsection.

**D. Waste Management at Well Sites**

The Department is updating the requirements for both temporary and long-term waste management related to oil and gas development with its proposed Rule. Site containments systems and practices are a key component to reducing potential threats of pollution to the waters of the Commonwealth— as are many of the spill reporting requirements and other practices such as the allowances for large volume modular tanks. Several the proposed regulations are developed based on sound field experience; however, Talisman offers the following additional suggestions to further clarify and streamline the Rule.

***78.56(a): Approved Storage Structures for Temporary Storage- Clarify "Other Approved Storage Structures"***

The wording in this provision appears inconsistent with the intended scope, confusing the details of the requirements. Talisman offers the following suggestions for clarification. First, the Board ought to update the provision heading to state: "Temporary Storage in Pits, Tanks and Other Approved Structures" to accurately reflect the scope of the provision. Second, to the extent "other approved storage structures" in 78.56(a) is to refer to those storage structures approved under the proposed subpart (a)(2) of 78.56, the Board could clarify the term to support efficient implementation of the requirement. While it may seem evident that this is what is intended by the Board, it should be specified in the initial language of the provision to avoid any confusion. Finally, the use of the term "regulated substance" seems inappropriate for this section, which is limited to substances at well sites that would be contained in pits, tanks or other approved storage structures. Talisman asks the Board to consider an alternative term.

***78.56(a)(3): Two Feet of Freeboard for Temporary Storage- Clarify Reach and Scope***

The scope and reach of the proposed rule seems unclear regarding the type of regulated substance it applies to and the Board should clarify that the requirements do not pertain to solidified waste. It appears that the proposal requires two feet of freeboard for open tanks or open storage structures for regulated substances in liquid form. However, this is not made clear by the proposed language. Because open tanks or open storage structures are used to store solidified waste, such as drill cuttings, two feet of freeboard is unnecessary. The Board should consider clarifying this language. Talisman proposes that the Board rewrite the second sentence of the provision to state: "If open tanks or open storage structures are used, the tanks and storage structures shall be maintained so that at least 2 feet of freeboard remain at

all times unless the tank or storage structures is provided with an overflow system to a standby tank or pit with sufficient volume to contain all excess fluid or regulated substances in liquid phase.”

***78.56(a)(6) and 78.57(g): Preventing Unauthorized Tank Access- Need to Accommodate Access to Tanks for Safety Management***

Talisman requests that the Rule provide for the need to vent or partially access temporary storage for other general safety management requirements and consider the differences between key locks and spring-loaded thief hatches where appropriate in defining what constitutes “reasonable measures” to prevent unauthorized third-party access to support the industry in achieving compliance. The Board could make the language more complete by defining what constitutes “reasonable measures” as some storage requires the option of partial opening for venting in the event the tank becomes pressurized, such as with produced water tanks. Talisman asks the Board to amend the provisions to allow for such access.

***78.57(f): Production Fluid Corrosion Control Requirements- Support with Risk-Based Guidance***

Subsection 78.57(f)’s requirement that all new, refurbished or replaced tanks that store brine or other fluid produced during operations of the well must comply with the applicable corrosion control requirements in 25 Pa. Code §§ 245.531 -245.534 is a major expansion on Pennsylvania tank regulations and, therefore, Talisman suggests the Board provide a protocol or guidance for a risk-based implementation schedule. Talisman asks for guidance on how an operator can reasonably manage and prioritize inspections based on the vast expansion of tanks falling under the scope of the Department’s Chapter 245 Administration of the Storage Tanks and Spill Prevention Program. Under Chapter 245, the Department currently exempts tanks which are used to store brines, crude oil, drilling or frac fluids and similar substances or materials and are directly related to the exploration, development, or production of crude oil or natural gas regulated under Act 13. In its current proposal, the Department is interpreting § 3218.4(b) of Act 13, which requires all permanent aboveground and underground tanks to comply with the applicable corrosion control requirements in the Department’s storage tank regulations, to mean compliance with §§ 245.531-245.534 (relating to corrosion and deterioration prevention).

An internal tank inspection, after the tank has been producing, requires specialist inspectors, in-depth cleaning and waste disposal procedures, confined space permits as well as other additional precautions and procedures to ensure safe and environmentally responsible inspection. Excessive inspection of tanks can result in damage to the internal coating of tank systems via access of personnel and inspection to the tank. This damage can exacerbate corrosion in the tank due to introduction of coating holiday tests. The overall cost to inspect atmospheric storage tanks on-site, considering the various requirements necessary to inspect the tank in a safe and environmentally prudent manner can easily exceed 50% of the cost to simply replace the existing tank with a new tank.

Therefore, to provide the maximum environmental gain of the proposal, while avoiding unnecessary risks, costs and inefficiencies, Talisman advocates that the Board provide language addressing the following: (1) options for phased implementation with tank operators whose tanks are currently exempt from Chapter 245, (2) a method for providing data from the Department outlining issues seen from recently installed Marcellus-dedicated production tanks specifying that the tanks are experiencing rapid deterioration, and (3) a method in which the Department will work with operators to obtain inspection

data with operators to ascertain whether there is a pronounced "risk" to tank integrity on new Marcellus infrastructure. In summary, Talisman suggests the Board consider a risk-based inspection approach to better focus inspection activities on atmospheric storage tanks where a leak could create a tangible environmental, personal safety, and/or negative impact on the community.

***78.58(b): Waste Processing at the Well Site- Clarify Language for Solidification and Bulking of Waste***

Talisman proposes that the Board amend this provision to specify that solidification and bulking of waste on the well site is permissible; thus, codifying the Department-approved practice. The Board could also ask the Department to publish a list of pre-approved bulking agents on their website. Accordingly, Talisman recommends the following amendatory language: "(4) bulking waste with Department-approved bulking agents."

***78.65: Site Restoration- Simplify and Direct Away from a Permit-Dependent Approach While Accommodating Landowner Rights***

Generally, Talisman recommends simplifying the language in this provision, with a movement away from permit-dependent standards. Upon the completion of drilling all wells on a multi-well pad, Talisman generally supports the reclamation plans of the Board, which include reclaiming all disturbed areas, including backfilling, grading, leveling, seeding, mulching, cleanup; and removal of all other equipment, supplies debris, and any other material not removed during demobilization. A general concern for Talisman is basing restoration requirements on when a well site has an active drill permit. Talisman believes the Board should base site restoration requirements, not on well development schedules or other arbitrary factors such as whether or not the operator is maintaining and renewing a well drilling permit for the site, but rather concentrate on how to best support the policy of Act 13 and The Clean Streams Law and landowner rights. Further complicating the use of drill permit expiration as a triggering event for site restoration is Act 13's definition for drill permit expiration in § 3211(i), which states that if drilling commences during the first one-year period of a drill permit, the permit shall remain in force until the well is plugged in accordance with § 3220 or the permit is revoked. This definition creates confusion in applying the proposed requirements throughout 78.65, particularly §78.65(d).

More specifically, Talisman commends the Board for including subsection 78.65(4), which provides for landowner written consent to satisfy some of the restoration requirements. However, the Board ought to go a step further to accommodate landowner rights by expanding the proposed §78.65(4) to read: "Written consent of the landowner on forms provided by the Department satisfies the restoration requirements of this section provided the operator develops and implements a site restoration plan that complies with paragraph (3)(i) and (iii)-(iv)." Subsection (3)(ii) should be deleted because this issue is already addressed in § 78.65(d) itself. The language "and all PCSM requirements in Chapter 102" can be deleted from the end of § 78.65(4) because it is already addressed in the provision's reference to § 78.65(3)(iii). Finally, the inclusion of subsection 3(v) should be deleted as a landowner may prefer an alternative to the 70% vegetative cover when they are taking over ownership and maintenance of the pad. Please see comment on "approximate original contours" on pg. 5 of this Comment.

***78.66(c)(1): Reporting and Remediating Releases- Align with Department Guidance***

The requirement to collect soil samples for laboratory analysis for spill of less than 42 gallons appears to be in conflict with the Department's guidance policy entitled Addressing Spills and Releases at Oil & Gas Well Sites or Access Roads, dated September 21, 2013. The guidance indicates that the responsible party only needs to excavate visibly impacted soil following the release of less than 42 gallons of a regulated substance. Statistical methods are only required when seeking Act 2 closure. Talisman asks the Board to consider this discrepancy in finalizing its proposed text. Additionally, the last sentence should read: "Completion of the cleanup may be documented through the process outlined in 25 Pa. Code §250.707(b)(1)(iii)(b)."

**E. Protection of Water Resources**

Talisman supports the Department's efforts to protect the vast water resources throughout Pennsylvania. Many of the provisions in the proposed rulemaking will continue to ensure that citizens experience the advantages of the oil and gas resources while minimizing impacts to waters of the Commonwealth. Talisman offers the following suggestions to assure both goals are achieved through the proposed text.

***78.52(d): Predrilling (or Prealteration) Survey- Revise to Allow for Mailing All Results at Once***

Though Talisman agrees with the concept of informing the Department and the applicable water users, it believes the Board should clearly state an operator has 10 business days from the receipt of the last sample result to mail the completed packet of sample results to applicable users. The proposed amendments to subsection (d) establish a new process for submitting predrill sample results to the Department and applicable water users. Under this proposed process, an operator electing to preserve its defenses under 58 P.S. § 3218(d)(1)(i) and (2)(i) shall submit all sample results taken as part of a survey to the Department within 10 business days of receipt of all the sample results taken as part of that survey. An operator must send a copy of sample results to water users within 10 business days of receipt of such results. Clarifying that operators have 10 days from receipt of the last sample result will allow operators to make one submission while avoiding unnecessary confusion, opportunities for mistaken completeness, and unnecessary expense with no added environmental benefit.

***78.68a(f): Horizontal Directional Drilling- Unnecessary Pre-Approval if the Department Releases a Comprehensive Pre-Approved List***

Given the long established practice of horizontal directional drilling across multiple industries (e.g., public utilities), the benign nature of the additives and the relatively few instances of issues while crossing streams related to such additives, it is unnecessary to require Department approval of such additives. The proposal requires prior Department approval before using any drilling fluid additive other than bentonite and water for horizontal directional drilling. It is recommended that subsection (f) be deleted. However, if the Board does decide to require such approval, it should clarify those standards it will use to evaluate the fluid additives directly in the regulation. Industry standards can vary, and in order to avoid costly and unreasonable delays, the language should expressly state the approach the Board will take. Additionally, the term "oil and gas operations" should be deleted and replaced with "associated with construction of oil and gas pipelines." Use of the term "oil and gas operations" seems confusing when the assumed intent is to only refer to a subset of that term: pipeline construction.

**78.69: Water Management Plan- Clarify Effective Dates, Criteria and Grandfathering of Existing Wells**

Due to the wide-ranging impact these revisions will have on oil and gas operations, Talisman requests clarification as to the effective dates for the new requirements. It is suggested that language be added to clarify the effective date for the new water management requirements and that wells constructed prior to that date are grandfathered in for purposes of the new requirements. Additionally, Talisman asks that the Board should streamline the exact requirements for the suggested water management plan by incorporating the requirements into the proposed Rule or by creating a standardized form with reasonable requirements prior to the proposed Rule's effective date. The Department has suggested what information it will require in the water management plan in its *Water Management Plan for Marcellus Shale Gas Well Development Example Format*, Document No. 5500-PM-OG0087, 4/2009 guidance. However, Talisman recommends formalizing reasonable criteria for water management plans for oil and gas wells in the Rule itself. See comment

**78.69(a): Water Management Plans- Clarify the Scope of the Requirement**

Talisman recommends the addition of language noting that a Water Management Plan is not needed for water source locations outside of Pennsylvania. This proposed section addresses posting, monitoring and reporting in the Ohio River Basin; reuse planning requirements, and the Water Management Plan expiration and renewals. The following is the suggested amendatory language: "prior to withdrawal or use of water sources from within this Commonwealth . . ."

**78.69(c): Water Management Plans- Assure Department-Accepted Disposal Method is Accounted For**

The proposed language should include the Department-approved method of disposal. Excepting Interstate Commission and public water suppliers, withdrawals alone in Pennsylvania do not require a permit, but withdrawals averaging more than 10,000 gallons per day over a 30-day period must be registered with the state. Under the Clean Streams Law, the Department has a duty to develop regulatory measures to encourage the use of reuse wastewater facilities, wastewater recycling facilities, and treatment and discharge facilities (25 Pa. Code § 92.2b (2010)).

The proposed text requires an unconventional well operator to develop a water reuse plan for fluids that may be used in future hydraulic fracturing operations. A water reduction strategy developed under 25 Pa Code Chapter 95.10(b) satisfies this requirement. Though the use of reuse wastewater facilities, wastewater recycling facilities, and treatment and discharge facilities should be encouraged, some operators do not have the facilities, the ability, or the need to treat and reuse flow-back and produced water. They should have the option of disposal available to them. The disposal option is accepted by the Department and therefore, the Rule should recognize that option.

**F. Beyond the Well Site**

As stated by the Department throughout its rulemaking process, the Rule also addresses changes to surface activities beyond the well pad itself. Talisman offers the following suggestions for the proposed text in these areas.

***78.67: Borrow Pits- Delete the Unnecessary Registration Requirement***

Talisman recommends the Board delete § 78.67(b) and clarify language in 78.67(a). Sections 78.67(c)(1) and (2) adequately ensure restoration of borrow pits. While § 78.67(a) requires the operator to comply with Chapter 102 and the performance standards in Chapter 77. Thus, it appears the registration requirement proposed in § 78.67(b) creates an unnecessary additional burden without any environmental benefit. Talisman suggests the Board remove this provision. Additionally, the end of subsection 78.67(a) requires the operator of a borrow pit to operate, maintain and reclaim the site in compliance with the environmental performance standards of non-coal mining regulations and with the erosion and sediment control regulations and "other applicable laws." It is suggested that either these "other applicable laws" be identified or that this all-encompassing reference be deleted. See Comment on the definition of "borrow pit" on pg. 5 of this Comment.

***78.68(h): Oil and Gas Gathering Lines- Clarification Opportunity as to Regulating Entity***

Applying the proposed definition of "gathering pipeline" in § 78.1 to the new § 78.68(h) could result in confusion between the jurisdiction of the Department and the jurisdiction of the Pennsylvania Public Utility Commission. It appears that incorporating the new definition of gathering pipeline in the new § 78.68(h) imposes U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration's ("PHMSA") regulations on all buried metallic pipelines that transport oil, liquid hydrocarbons or natural gas from individual wells to an intrastate or interstate transmission pipeline. PHMSA regulations in 49 C.F.R. Part 192 and Part 195 and the related construction guidelines are implemented by other agencies. The Pennsylvania Public Utility Commission has regulatory jurisdiction over intrastate natural gas pipelines; and PHMSA jurisdiction over interstate natural gas pipelines and hazardous liquid pipelines. The proposed language of § 78.68(h) (*i.e.*, inclusion of those incidental gathering and flow lines from the wellhead to point of commingling) would arguably include all pipelines regardless of operating condition, design and use under 49 C.F.R. Part 192 and Part 195. Talisman recommends deleting § 78.68(h) to quash any such confusion. See comment the definition of "Gathering Pipeline" on pgs. 5-6 of this Comment.

**G. Well Reporting**

Act 13 includes several new notification requirements where operators are required to notify the Department a set time prior to conducting various activities. For example, operators are required to provide the Department "24 hours' notice prior to cementing all casing strings, conducting pressure tests of the production casing, stimulation and abandoning or plugging an unconventional well" pursuant to Section 3211(f)(2) of Act 13. Talisman is concerned that there has been some confusion as to how these notices are to be provided to the Department. To avoid such confusion with the Board's new provisions, Talisman suggests the following minor revisions.



**78.122(a)(11): Delete Requirement Requiring Operator to Provide Unnecessary and Confidential Information**

The proposed language requiring an operator to include methane encountered other than in a target formation creates a competitive disadvantage for operators diligently complying with the provisions requirements. Talisman recommends deleting subsection (a)(11).

**78.122 (b): Well Record and Completion Report: Defining When a Well is Capable of Production**

Section 78.122(b) uses the ambiguous triggering event of "when a well is capable of production," a term not defined by the Board in Chapter 78 and for which there is not a standard industry definition. Events that trigger reporting must be clear, reasonable, and easily identified to assure compliance. Talisman recommends replacing the triggering event in the first sentence of subsection (b) to read: "Within 30 days from the end of completion of a well, after the first 24 hours of gas to surface, the well operator shall submit a completion report to the Department on a form provided by the Department that includes the following . . . ."

**78.123(a): Logs and Additional Data- Define Triggering Events for Department Log Requests**

The Board should enumerate the triggering events for when the Department can request logs and additional data and further specify details of this provision given the propriety nature of the information requested. Talisman recognizes that Act 13 gives the Department the authority to request copies of any electrical, radioactive or other standard industry logs. The Department is currently requesting this information in each individual unconventional drill permit itself. Talisman is concerned that this request exposes compliant operators submitting such logs for each well to a competitive disadvantage to other operators who are not providing this information. By defining the events that can trigger the Department's request, the Board will limit the disadvantageous effect on operators that submit logs. Additionally, the language "other standard industry logs" should be deleted from this section as there are no such additional logs by which operators select logging programs. Thus, this language appears to create unnecessary confusion.

We appreciate your consideration of our comments. If you have any questions, please contact me at [tnormane@talismanusa.com](mailto:tnormane@talismanusa.com) or (724) 814-5341.

Sincerely,



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