TALISMAN ENERGY

TALISMAN ENERGY USA INC.
50 Pennwood Place
Warrendale, Pennsylvania 15086
Tel: (724) 814-5300
Fax: (724) 814-5301

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Submitted electronically to: RegComments@pa.gov

Department of Environmental Protection Policy Office
400 Market Street
P.O. Box 2063
Harrisburg, PA 17105-2063

Re: 25 Pa Code Chapter 78a Environmental Protection Performance Standards at Oil and Gas Well Sites –Advanced Notice of Proposed Rulemaking published in PA Bulletin Vol. 45, No. 14 (April 4, 2015)

Dear Sir or Madam:

Talisman Energy USA Inc. submits the following comments on the proposed revisions to Chapter 78a governing unconventional oil and gas wells.

Talisman Energy Inc. was recently acquired by Repsol S.A., resulting in an independent, integrated global organization. As part of Repsol, Talisman Energy USA Inc. continues to operate as an upstream oil and gas producer, active in the Marcellus Shale. In performing operational activities, we strive to abide by all federal, state and local regulations, within all operating jurisdictions, and we follow proven practices in order to minimize impacts on the environment and safely deliver energy resources.

Talisman operates over 400 wells in the Commonwealth. The company has an ongoing commitment to building positive, long-lasting relationships in the areas where we operate, and we have a vested interest in, and are directly impacted by, the proposed rule. Talisman greatly appreciates this opportunity to participate in the Department's considered revisions of Chapter 78a.

GENERAL COMMENT

Many of the new rules refer to electronic submittal. The Department should provide for alternative submittal methods for situations where electronic portals are down or have not yet been established.

COMMENTS ON DEFINITIONS

Many of the Department's proposed definitions unfortunately invite confusion rather than clarity. The use of broad, subjective and/or undefined terms within definitions renders some definitions

meaningless or unclear. Please consider the following revisions and deletions to restore some clarity to this important section of the oil and gas regulations.

"Approximate Original Conditions": Please delete the phrase "and blends into and complements the drainage pattern of the surrounding terrain." The preceding language about closely resembling pre-construction contours states the restoration concept well – it might not be possible to restore original conditions and blend into surrounding terrain if pre-construction contours did not blend in (e.g., if the land was previously developed or farmed), so these two phrases may conflict. Deleting this extra phrase creates one clearer standard.

"Containment systems": Please replace the word "container" with "barrier" since containment systems can rely on liners and other barriers that are not necessarily "containers."

"Other critical communities": This definition is so broad that it is entirely without meaning or enforceability. This definition removes any potential standard for what qualifies as a "critical community"; anything and everything could be viewed as a critical community. Use of the word "including" in Subsection (1) signals that not only are non-endangered and non-threatened plants "critical communities," but so is anything else. The definition is simply without limits. To provide some certainty to operators, citizens and stewards of protected species, please consider the following changes:

- Delete the text of subsection (1) to refer only to the subsections (i), (ii), and (iii) (i.e., delete "plant and animal species that are not listed as threatened or endangered by a public resource agency.") Note, also, that use of the term "public resource agency" in this section invites more uncertainty as described in our comments below on the definition "public resource agency."

- Revise subsection (2) to refer to habitats identified in the threatened or endangered species' listing. It appears that the Department is attempting to refer to habitats in this section, and the Endangered Species Act is an existing program for the government to identify what qualifies as a habitat in need of protection.

- Delete subsection (3). The terms "significant natural features" and "significant natural communities" are so broad and subjective as to be without meaning. As applied within proposed Section 78a.15, arguably, any individual or informal affiliation of individuals could claim to be an "agency" protecting what they deem to be a "significant natural community" or "significant natural feature" and this individual or group would be given the right to delay or deny an operator's application. This outcome would inappropriately give anyone governmental power. As an alternative to deleting subsection (3), please consider defining an "agency" as a government agency established under the laws of Pennsylvania.

"Public Resource Agencies": Please insert the word "governmental" so that this definition reads "A~~n~~ **governmental** entity responsible for managing a public resource including..." Without this qualification – and especially because of the use of the word "including" – any

individual or any informal affiliation of individuals can claim to be a "public resource agency." Under the proposed revisions to section 78a.15, public resource agencies are slated to receive tremendous power to delay or prevent the issuance of a well drilling application. This right should be reserved for a defined and identifiable set of true government agencies that represent the citizens of the Commonwealth and/or its common resources.

"Well development pipelines":

- This definition should be revised to specifically exclude pipelines that solely transport freshwater. Many of the requirements of section 78a.68b, relating to well development pipelines are unnecessary as applied to freshwater pipelines. This defined term is only used in Section 78a.68b ("well development pipelines for oil and gas operations"), which contains requirements for, among other things, daily inspections at subsection (h), emptying and depressurizing pipelines at subsection (j), and mapping of pipelines at subsection (m). These requirements are excessive for pipelines transporting freshwater. While more stringent requirements might be appropriate for pipelines transporting residual waste such as flowback and production water, freshwater lines do not present the types of risks that this section is written to mitigate. Talisman suggests modifying this definition to read: "Pipelines used for oil and gas operations, **except pipelines transporting freshwater**, that…"

- Did the Department intend to include an "and" or "or" between subsections (i) and (ii) in this definition? Does a pipeline that loses functionality after the well has been serviced, even if the well is not used for drilling or hydraulic fracture stimulation, qualify as a "well development pipeline"?

COMMENTS ON SUBSTANTIVE SECTIONS

Section 78a.15(f)(1)(vii) – Application Requirements
Please define what is meant by "common areas." This setback is unclear and left to interpretation.

Section 78a.15(f)(1)(viii) – Application Requirements
Please define what is meant by a "wellhead protection area." Who can establish a wellhead protection area? How would a wellhead protection area be established? In light of the proposed permit restrictions that would follow from the presence of a wellhead protection area, the Department should further define this.

Section 78a.17—Permit Expiration and Renewal
Talisman recommends that it would be easier for the Department and permittees to administer permits that have original two-year terms with the option for one-year renewals. Operationally, a longer original term limit would allow for greater flexibility in planning the full field development of wells and would require less work and rework for the Department and permittees.

Section 78a.41 – Noise Mitigation

Talisman does not believe that the Department has the legal jurisdiction or authority to implement or enforce a noise standard. In most cases, the Department regulations are rooted in an underlying statute, but in this case, there is no underlying Act 13 statute to form the basis for a proposed rule. As a matter of law and administrative procedure, Talisman strongly objects to the adoption of a noise mitigation regulation absent an authorizing statute on this subject.

However, if the Department is unwilling to forego adoption of a noise mitigation standard, Talisman encourages the Department to postpone development of this rule under a separate rulemaking rather than introducing this new subject matter at the last stage of Chapter 78a rule development. The current rule is too vague and allows for too much subjective implementation and enforcement. In order to develop a rule that is predictable for operators, enforceable by the Department, and responsive to citizen concerns (as the Department cites for the justification for this rule), this subject should be addressed separately.

For example, the rule should take into account the surrounding terrain and ability for sound to carry, proximity to residential areas, ambient noise levels, etc. The current version of the rule does not communicate the Department's expectations nor does it provide any specificity to allow for operators or communities to know what constitutes compliance. Talisman urges the Department to delete the proposed noise mitigation standard for this rulemaking.

Section 78a.51(d)(2) – Protection of Water Supplies

The concept of a "higher quality" water supply is vague and unclear. Presumably, the state's safe drinking water standards set a floor for acceptable water quality – including aesthetic standards. If "taste" is what the Department is implying in this section, this is a highly subjective standard where one resident might prefer softer water and consider this "higher quality" and other resident might prefer harder water and consider this "higher quality." The state's drinking water standards provide an appropriate and safe standard for water supplies for all residents across the state and should be the only measure referenced in the regulations.

Section 78a.52a – Area of Review

Please define what is meant by a "historical source." The universe of sources to be consulted is unclear. When should this area of review search be conducted relative to submitting the well application?

Section 78a.55(i)(5)(*i*)(I) – Control and Disposal Planning; Emergency Response

Replace the term "temporary pipelines" with the Department's replacement term "well development pipelines." Please also see Talisman's questions and concerns below about whether freshwater pipelines fall within the definition "well development pipelines."

Section 78a.56 – Temporary Storage

Talisman supports the Department's exemption for modular storage tanks that store only fresh water. We believe that this exemption is also appropriate for proposed regulations dealing with well development pipelines (see section 78.68b).

Section 78a.57(a) – Control, storage and disposal of production fluids

This section prohibits the use of open top containers "to store brine and other fluids produced during operation of the well." Please clarify whether "operation of the well" also refers to flowback. It is common industry practice to use open top tanks for flowback during the flowback and commissioning processes. The use of enclosed tanks to store flowback as it is flowing from the well could require specialized structures that would introduce safety risks. The ability to use open top tanks during these activities is important for properly monitoring flowback quality. Importantly, open-top containers are used within secondary containment systems as would be required by proposed Section 78a.64a, which would provide adequate protection from spills or releases. Please revise this section to allow for the continued use of open-top containers during flowback phases provided the containers are kept within secondary containment.

Section 78a.57(f) – Control, storage and disposal of production fluids

By creating a requirement for all aboveground storage tanks to be managed in accordance with 25 Pa Code Sections 245.531 through 245.534, it is unclear whether operators may be required to conduct in-depth inspections of tank liners at 10- or 20- year minimum intervals. Talisman requests that the regulation be modified to allow for other methods to demonstrate compliance, such as use of double-walled/bottomed above-ground storage tanks with interstitial monitoring to ensure that the primary container integrity is maintained. Temporary shutdown, evacuation, and cleaning of tanks required to conduct in-depth liner inspections requires well shut-in, produced water transfer/handling, and confined space entry that does not appear to be warranted when other monitoring/inspection methods are appropriate.

Section 78a.57(i) – Control, storage and disposal of production fluids

This subsection is too vague for operators to know what is required. For example, what will be checked during an inspection and what will be required by the form? Please amend the regulation to specify what is required during the inspection (exterior, only, for evidence of corrosion?) Please also amend the regulation to specify what inspection points will be noted on the form so that the compliance expectation is based in a rule rather than a form that can change with no notice. The Department should also describe in the rule what qualifies as a "deficiency" that could result in an expectation that operators will discontinue use of the tank (and, incidentally, perhaps need to shut in production of the well). Is flaking exterior paint a deficiency that requires immediate discontinued use of the tank? Please provide more detail for operators to know what is required of them and how they must respond if certain observations are noted during an inspection.

Section 78a.58(a) – On-Site Processing

The use of the word "may" is unclear in the introductory phrasing "The operator may request approval…" Are operators now required to request this approval for certain types of processing, or is it only an option?

Section 78a.58(d) – On-Site Processing

This subsection would require three days' notice before mixing fluids with freshwater. Would the Department view the comingling of produced water and freshwater to qualify as "processing" described in (b)(1)? For example, as part of routine site maintenance, produced water trucks may vacuum rainwater from secondary containment or from well cellars, etc. Please confirm via revision to the rule that these types of practices do not require three days' advance notice because these notices would hinder ordinary, necessary and prudent site maintenance activities. To address this issue, we recommend revising the regulation to apply only to the activities described in 78a.58(b)(2) and (b)(3) so this section would read: "Operators conducting activities described in subsections (b)(~~1~~)(**2**)-(3).

Alternatively, rather than requiring operators to provide constant and rolling advance notices, we encourage the Department to accept one single advance notice of any activities described in (b)(1), (b)(2) or (b)(3).

Section 78a.58(d) – On-Site Processing

Use of the word "installation" and the last sentence of this subsection seems misplaced as there is no reference to installation previously in this rule. Was this an error?

Section 78a.59b(f) – Freshwater Impoundments

The Department should revise subsection (f) to account for regional differences throughout the gas producing areas of Pennsylvania. The seasonal high groundwater table varies in different parts of the state. Thus, it may be more difficult to construct these facilities 20 inches above the ground water table in North Central Pennsylvania, where the groundwater table is naturally high. This rule, as written, could effectively prohibit the construction of new freshwater impoundments in entire regions.

Section 78a.61(a)(2), (b)(2) – Disposal of Drill Cuttings

Subsections (a)(2) and (b)(2), list "drilling mud" among an inclusive list of "regulated substances." However, the definition section defines "regulated substances" as: "Any substance defined as a regulated substance in section 103 of Act 2 (35 P.S. § 6026.103)." The definition found in section 103 of Act 2 further cross references to a list of various environmental statutes. It is not immediately clear if "drilling mud" is appropriately categorized under the definition of "regulated substances" in either context. The Department should clarify the specific statutory program under which "drilling mud" is regulated. Talisman recommends making a clear determination as to whether "drilling mud" is appropriately listed as a "regulated substance," either by providing a list of examples within the definition of "regulated substances," or by providing a definition for "drilling mud" that makes it clear whether it is a "regulated substance."

Section 78a.64a(b) – Containment Systems and Practices at Well Sites

The definition of "containment system" refers exclusively to barriers, but the DEP historically has allowed the use of engineering controls as a containment system instead of relying exclusively on physical barriers. The current definition of "containment system" could require the use of pad liners as a containment strategy for vehicles transporting regulated substances on site. However, heavy truck traffic can take its toll on liners and they can become torn. Rather

than require liners as a necessary element in all containment systems, DEP should continue allowing for engineering controls (e.g., the use of "check valves" or modified unloading procedures), which can sometimes be a more reliable containment strategy than liners and which may be better suited to preventing releases from vehicles in the first place or minimizing the potential that unintended spills might reach the ground.

By creating a requirement for all aboveground storage tanks to be managed in accordance with 25 Pa Code Sections 245.531 through 245.534, it is unclear whether operators may be required to conduct in-depth inspections of tank liners at 10- or 20- year minimum intervals. If these inspections would be reuqired, Talisman requests that the regulation be modified to allow for other methods of compliance demonstration, such as use of double-walled/bottomed above-ground storage tanks with interstitial monitoring to ensure that the primary container integrity is maintained. Temporary shutdown, evacuation, and cleaning of tanks required to conduct in-depth liner inspections requires well shut-in, produced water transfer/handling, and confined space entry that does not appear to be warranted when other monitoring/inspection methods may be appropriate.

Section 78a.64a(d)(1) – Containment Systems and Practices at Well Sites
Please clarify what is meant by a "containment system." Is a "duck pond" or temporary, portable containment sufficient?

Section 78a.64a(e) – Containment Systems and Practices at Well Sites
Terminology in this section leads to confusion. The term "secondary containment" should be defined if it has a meaning that is different than "containment system." The definition should indicate that the purpose of a secondary containment is to contain spills and releases to the area immediately surrounding the source, such that the spilled material cannot contact the environment or present a safety risk.

Further, it is unclear what is meant by the statement: "A well site liner that is not used in conjunction with other containment systems does not constitute secondary containment for the purpose of this subsection." Does this mean that operators need secondary containment *on top of* a well site liner? As written, the sentence appears to be saying that a well site liner alone will not be considered secondary containment. Please clarify this section.

Section 78a.65 – Site Restoration
The site restoration timeline should begin to run from the date that completions activities have ended, rather than from the "completion of drilling." Operators require the same well site dimensions for both drilling and completions activities, and it would not be practical to restore the site prior to this point. Talisman recommends amending the rule to read: "Within 9 months after **completions activities have ceased**, the owner or operator shall undertake post-drilling restoration of the well site . . ."

Section 78a.65(a)(1)(ii) – Site Restoration
Subsection (a)(1)(ii) should be amended to delete the word "before" and replace it with "within 7 days of" moving drilling equipment from the well site. As written, the proposed rule does not

take into account, for example, the fact that a mousehole cannot be filled until after the drilling equipment is removed from the well site. Talisman proposes the following changes: "A drill hole or bore used to facilitate the drilling of a well shall be filled with cement, soil, uncontaminated drill cuttings or other earthen material **within seven (7) days of** moving the drilling equipment from the well site."

Section 78.66(b)(4) – Reporting and remediating spills and releases

This section should be revised to read "...sample water supplies that have been polluted or for which there is a **likelihood** ~~potential~~ of pollution...". The "potential for pollution" for any spill is a subjective term. However, following successful remediation activities, there should be no likelihood of pollution of water supplies – especially if and where remediation involves removal of source material and confirmation that the area meets Act 2 cleanup levels (if required). Talisman suggests that the term "potential for pollution" be determined by a governmental agency prior to requiring that water supplies be sampled following a spill or release.

Section 78a.68b – Well Development Pipelines for Oil and Gas Operations

Many of the requirements of section 78a.68b, relating to well development pipelines, are unnecessary as applied to freshwater pipelines. For example, the requirements for daily inspections at subsection (h), maps at subsection (m), and emptying and depressurizing at subsection (j) are excessive for pipelines transporting freshwater. While more stringent requirements might be appropriate for pipelines transporting residual waste such as flowback and production water, freshwater lines do not present the types of risks that this section is written to mitigate.

Section 78a.73(d) – General provision for well construction and operation.

It appears that this rule is attempting to create a new liability structure that requires one operator to plug another operator's improperly abandoned well. Liabilities should only be established by the Legislature – not by regulation. Please provide the statutory basis for this rule and if there is not one, we encourage the Department to delete this rule and to defer to the Legislature to create any liability framework deemed necessary. Alternatively, if the Department decides to retain this rule, Talisman makes the following recommendations.

Please clarify whether the Act 13 definitions of "orphaned", "abandoned" and "altered" will apply to Chapter 78a.

The term "alteration" is defined in Section 3203 of Act 13 as "an operation which changes the physical characteristics of a well bore." However, hydraulic fracturing does not typically change the physical characteristics of a well and therefore does not fall within the scope of "altering" as defined by Act 13. Talisman recommends the Department provide a definition or clarifying language that explains what type of "alteration" would lead to the liability described here.

The law should first look to the former owner, operator or their successors to plug a well – not an operator who inadvertently "alters" the well through their lawfully conducted activities. Although Talisman suggests deleting this rule, if the Department retains it, please revise the rule to require that the (1) last known owners or operators of abandoned and orphaned wells should

be sought first to plug their wells; and (2) include a process by which the Department would deem a well to have been altered and the timelines within which plugging would be expected; and (3) provide a means by which the Department will ensure access to privately-owned property to allow for plugging operations.

Section 78a.121- Production Reporting

The proposed revision would require monthly reporting of waste production. It is unclear what benefit would be derived from this substantial additional reporting burden. An operator's receipt of this information is typically delayed in that waste manifests/scale tickets may not be received for several weeks following disposal – consequently, more frequent reporting to the Department would not necessarily reveal the kind of real time waste information as might be sought through the proposed revision to this rule. We recommend removing the requirement to report waste information on a monthly basis as there is no apparent public or environmental benefit to requiring operators to report more often than is currently required and on any more frequent of a basis than is required for other industries regulated by the Department.

Again, Talisman appreciates the opportunity to participate in this process and we thank the Department in advance for their openness to this feedback.

Respectfully submitted,
TALISMAN ENERGY USA INC.

Emily T. Lewis
Legal Counsel
Talisman Energy USA Inc.
50 Pennwood Place
Warrendale, PA 15086
elewis@talismanusa.com

cc: Todd Normane
Rick Kessy
Walt Hufford