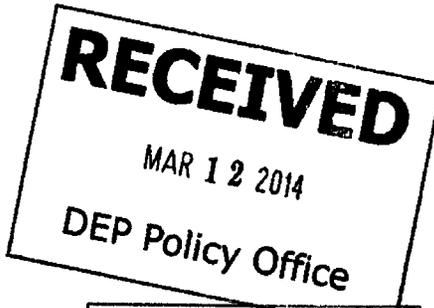




SWEPI LP

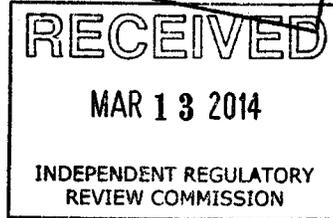
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2100 Georgetown Drive
Sewickley, PA 15143
724-933-4979

March 11, 2014

Environmental Quality Board
P.O. Box 8477
Harrisburg, PA 17105-8477



Re: Comments on Proposed Amendments to Chapter 78, Environmental Protection Performance Standards at Oil and Gas Wells

Dear Sir/Madam:

This letter serves as SWEPI LP's (Shell's) written comments to the Environmental Quality Board's "Proposed Amendments to Chapter 78, Environmental Protection Performance Standards at Oil and Gas Wells".

Shell commends the Department of Environmental Protection's (DEP) effort to work with a broad stakeholder group to address many of the issues related to Chapter 78 and we look forward to future dialog.

Our comments are primarily on the Abandoned and Orphan Well Identification Process (78.52a) and Onsite Process (78.58). Specific language to enhance those areas of the regulations is detailed below.

Boldface language in black is the current rulemaking language proposed by the Department. **Boldface language in blue** is for the Department's consideration.

78.1. Definitions – Water Source (iv) and (2) – It is not clear whether recycled water obtained from 3rd party vendors (e.g., HydroRecovery, CARES, etc.) would require a WMP. This should be clarified.

Proposed §78.52a (abandoned and orphaned well identification) establishes minimal requirements for operators to identify orphaned or abandoned wells near the location of proposed new wells. Unless properly avoided or mitigated, these legacy wells can, in some cases, provide a vertical conduit for stray gas migration from the deeper subsurface to shallower freshwater aquifers or to the surface. The proposed regulation does not include provisions to ensure that operators evaluate and mitigate these potential risks.

Shell supports the recommendation made by the State Review of Oil and Natural Gas Environmental Regulations, Inc. (STRONGER) in its September 2013 Pennsylvania Follow-Up State Review at Section VII.5, which calls on the Department "to consider regulations to require operators to evaluate and mitigate potential risk of hydraulic fracturing communication with active, abandoned or orphan wells and other potential conduits that penetrate target formation or confining formations above."

To support the Department's evaluation of such provisions, American Petroleum Industries of PA (API-PA) submitted a draft straw man recommendation to the Oil and Gas Technical Advisory Board in August 2013 during its work group deliberations. The straw man is incorporated into sections 78.52a and 78.73 of this comment letter.

78.52a. Abandoned and orphaned well Well identification and evaluation.

(a) Prior to hydraulically fracturing drilling the well, the operator of a horizontal gas well or horizontal oil well shall make a good faith effort to identify the location of all operating, inactive, orphaned or abandoned wells in accordance with subsection (b) within 1,000 feet measured horizontally from the vertical well bore and 1,000 feet measured from the surface above the entire length of a horizontal well bore in accordance with subsection (b) within a rectangular are of investigation that extends:

- (1) Horizontally to a distance, and in the direction of predicted fracture propagation;**
- (2) 500 feet beyond both the toe and the heel of a horizontal well in directions parallel to the primary well azimuth; and**
- (3) Vertically along the entire lateral length of the well, from the depth of the shallowest well perforation upward to such depth that a predicted barrier to fracture propagation can be documented (above which vertical fracture growth is considered geomechanically implausible).**

Prior to hydraulically fracturing the well, the operator of a vertical oil or gas well shall make a good faith effort to identify the location of all operating, inactive, orphaned or abandoned wells within 500 feet of the well bore in accordance with subsection (b). For the purposes of this section a gas well is a well which is producing or capable of producing marketable quantities of gas or of gas and oil with a gas-oil ratio of more than 100 MCF per bbl. of oil.

(b) Identification shall be accomplished by conducting the following:

- (1) A review of the Department's orphaned and abandoned well database;**
- (2) A review of company records, available records of offset operators, public databases, and other regulatory agency records;**
- (3) A review of historical maps (i.e. WPA, USGS, Pennsylvania Geologic Survey, operator "farm sheet" maps), where available;**
- (4) A review of historical air photos available on the Pennsylvania State University 'Penn Pilot' website (<http://www.pennpilot.psu.edu/>).**

(3) Submitting a questionnaire on forms provided by the Department to landowners whose property is within the area identified in subsection (a)

regarding the precise location of orphaned and abandoned wells on their property.

- (c) Prior to drilling a well, the operator shall assess the potential risk of hydraulic fracture communication with operating, inactive, abandoned or orphan wells that penetrate the target formation or confining formations above. The assessment shall be accomplished by conducting the following:
- (1) A determination of how far away an operating, inactive, abandoned or orphan well is in the subsurface and whether a well is within the path of predicted lateral propagation of fracture stages planned for the well at the targeted reservoir level.
 - (2) Identification of faults at the reservoir level that may be penetrated by an operating, inactive, abandoned or orphan well or that lies in the path of predicted propagation of fracture stages planned for the well.
 - (3) An assessment of the condition and quality of the plugging of any abandoned or orphan well, if possible. Such assessment may include a review of available historical well reports, geologic reports and descriptions, wellbore diagrams and construction schematics, plugging and abandonment reports, DEP plugging and abandonment certificates, wireline well logs, cement bond logs or other available information on the abandoned or orphan well.
- (d) Prior to drilling a well, the operator may revise the proposed wellbore path, revise the well completion design, or take other actions to mitigate the risk of potential communication, if the operator determines that hydraulic fracture communication may occur with a well.
- (e) (e) Prior to hydraulically fracturing a well, the operator shall submit a plat to the Department showing the location and GPS coordinates of orphaned and abandoned wells penetrating at or below the planned reservoir interval or overlying primary confining layer that have been identified pursuant to subsection (b) and proof of notification that the operators submitted questionnaires pursuant to subsection(b)(3)

78.58 – Onsite processing.

See the following proposed language for addition to Chapter 78. Specifically, it provides for the temporary offsite treatment and/or processing of 804 and/or 802 fluids for the express purpose of recycling/beneficial use in other fracturing/completions operations without obtaining a transfer station permit for the offsite location. Offsite is defined as a location other than where the residual waste was generated and/or where it will be re-used. This language would also fill the existing gap associated with the OG71 process that hinders recycling: OG71s are specific to the generating waste

location and/or the receiving, re-use location. They also only apply for the drilling and completions phases of well development.

This language could be added to the current 78.57; it would also be appropriate to utilize the currently reserved 78.59. If neither, it could be added to 78.58 but with change to the 78.58 title. This proposed language is NOT to be confused with, nor intended to replace, the existing allowance to (and associated regulation of) temporarily store residual waste offsite per 25 Pa Code Chapter 299. Rather, it creates a transfer station "lite" process that recognizes the spatial diversity, mobile nature, and temporal brevity of upstream oil and gas operations; the current transfer station permitting process does not facilitate oil and gas wastewater recycling.

An operator may temporarily store and/or process brines and/or fracing fluid at a wellsite to be beneficially used at a wellsite other than where the fluids were generated, so long as the following conditions are met:

- a. **The wellsite:**
 - i. **is permitted and bonded under the Act; and**
 - ii. **maintains a current Preparedness, Prevention and Contingency (PPC) plan that is consistent with the Department's regulations; and**
- b. **Operators maintain accurate transportation records to demonstrate that fluids are being temporarily stored and/or processed for beneficial re-use, consistent with Section 3218.3 of the Act;**
- c. **Temporary storage and/or processing:**
 - i. **complies with the applicable requirements of the Act and regulations promulgated thereunder;**
 - ii. **occurs in approved storage structures in accordance with applicable requirements of sections 78.56 and 78.57;**
 - iii. **is conducted in accordance with subsections (a) or (b) of 78.58; and**
 - iv. **will not exceed a single consecutive twelve month period (all onsite activity incidental to temporary storage and/or processing must occur within this timeframe);**
- d. **The operator must notify the Department of locations where temporary storage and/or processing will occur a minimum of three (3) days prior to the commencement of activity. This notice shall be submitted electronically to the Department through its website and include the intended date(s) of activity commencement; and**
- e. **An operator that stores, processes and/or beneficially reuses brine or fracing fluids pursuant to this section in accordance with this paragraph shall be:**
 - i. **deemed to have a residual waste permit by rule under 25 Pa. Code Chapters 287-299 (Article IX); and**
 - ii. **is not required to apply for a permit under Article IX or comply with the operating requirements of Article IX so long as the authorized storage, processing and beneficial reuse activities are conducted in accordance with this Chapter.**

78.64a(k) – This subsection should be revised as follows to allow for document storage on site: **An inspection and maintenance log ~~Inspection reports and maintenance records~~ shall be available at the well site for review by the Department. The inspection reports and maintenance records shall be provided to the Department upon request.**

78.68b – General comment – A provision should be added to this section requiring the pipeline to be designed for this use and be compatible with the material being transported.

78.68b(c) – The term “under bridges” is unclear. We have spoken with PennDot about running temporary water lines within the bridge trusses. Would this be considered “under bridges” or would it be considered part of the structure since it would not obstruct flow in any way and does it matter?

78.68b(d) – This subsection should be revised to clarify that a heat fused joint of HDPE pipe, fused according to ASME specifications, would not be classified as a joint under this subsection as heat fused joints are equal to the strength and integrity of the pipe itself. It is suggested that the language be changed to refer to the joints as “threaded or mechanical joints”.

78.68b (f) – Variable spacing for flagging based on setting (e.g., woods vs. fields) and risk (e.g., where a vehicle might run over the line) should be considered.

78.73. General provision for well construction and operation.

(c) Orphaned or abandoned wells Wells identified pursuant to section 78.52a that likely penetrate a formation intended to be stimulated shall be visually monitored during stimulation activities. The operator shall immediately notify the Department of any change to the orphaned or abandoned well being monitored and take action to prevent pollution of water of the Commonwealth or discharges to the surface.

Please note that Shell generally endorses additional comments submitted by the American Petroleum Industry with respect to the proposed regulatory package.

Please contact me if you have any questions or require further clarification or discussion. Thank you for this opportunity to submit comments on this very important regulatory process.

Sincerely,



H. James Sewell
Shell Appalachia
Environmental and Regulatory Team Leader

CC: John Hines
Jason Shoemaker
Steve Rhoads