

3042

RECEIVED
IRRC

2014 MAR 12 AM 4: 06

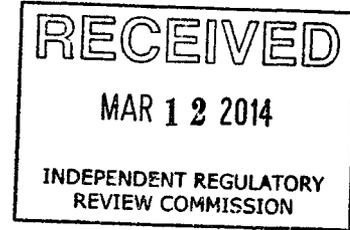
3042



Mar. 14, 2014

Via: Electronic Submission – regcomments@pa.gov

Environmental Quality Board
 Rachel Carson State Office Building, 16th Floor
 400 Market Street
 Harrisburg
 PA 17101-2301



Re: **Comments on Proposed Amendments to 25 Pa. Code Chapter 78
 Environmental Protection Performance Standards at Oil and Gas Well Sites
 [43 Pa.B. 7377-7415]**

To Whom It May Concern:

Inflection Energy PA LLC herein presents comments on the amendments to the Chapter 78 Regulations proposed by the Pennsylvania Department of Environmental Protection. Inflection is an independent natural gas exploration and production company which has been conducting Marcellus Shale operations in Pennsylvania since 2011. As part of the community affected by the proposed amendments to the CH 78 regulations, Inflection submits the following comments for consideration. Inflection holds a Board Member position in the Marcellus Shale Coalition which is submitting comments independently on behalf of all member companies. As such, Inflection herein incorporates the comments of the MSC by reference and provides several other comments not addressed in the MSC collective comments.

Comment No. 1: Section 78.1: Definitions

There are two definitions which are either incorrect or unclear as proposed. Inflection provides an explanation and proposes alternative texts.

Regional groundwater table The definition proposed is incorrect in almost every manner.

- a) The proposed definition states that the regional water table is “the fluctuating upper surface” of the groundwater zone, but it then goes on to state that the term does NOT include “the seasonal high water table.”

Response: The only reason there IS such a thing as a seasonal high water table at any location is because the water table elevation fluctuates. Accordingly, the definition is a self-contradictory mis-representation of the very concept of a water table. Inflection proposes an alternative text below.

- b) The definition states that the regional water table is a condition of either an unconfined or a confined aquifer.

Response: It is incorrect to define the potentiometric elevation of groundwater in a confined aquifer as a water table condition. By definition a *water table aquifer* is an unconfined aquifer (American Geological Institute, 1998 & 2006). The proposed incorrect definition could have resulted from the AGI definition of the term “water table” which states that the water table might be present and measurable within a confining bed, but the cross-referenced definition of the included term “confining bed” does not mean, *a priori* a confined aquifer.

To emphasize, there is no water table in the context of a confined aquifer and the definition is confusing and could result in mis-interpretation and erroneous conclusions, especially pertaining to shallow drinking water aquifer systems. Inflection proposes an alternative definition below.

- c) The proposed definition of the water table is that at the depth of the water table “the hydrostatic pressure is equal to ambient atmospheric pressure.”

Response: That definition is patently incorrect. Hydrostatic pressure is the internal water pressure which results at any depth from the weight of an overlying column of water; i.e., a column of water of some height will result in a unique hydrostatic pressure. It is not physically possible for there to even be a hydrostatic pressure at the upper surface of a column of water. The correct term in this instance is “pore water pressure” (AGI, 1998 & 2006) and not hydrostatic.

This entire definition must be changed for the simple reason that it is wholly contradictory to established definitions and to the common understanding and usage of the term throughout the groundwater sciences and engineering community. Inflection is concerned that an inconsistent definition will result in confusion and misconceptions in the general public regarding the natural condition of water resources which could create ambiguities in any public forum or legal action.

Inflection recommends the following definition as a replacement:

Regional groundwater table: The fluctuating upper water level surface of an unconfined aquifer at which the pore water pressure is at atmospheric pressure. The term does not include the upper surfaces of perched groundwater zones.

Stormwater Inflection proposes to simplify the proposed definition which states:

“Runoff from precipitation, snowmelt, surface runoff and drainage.”

The problem with the definition as proposed is that it literally says that stormwater is:

Runoff from runoff, which does not make sense;

and it is:

Runoff from drainage. Runoff occurs as a result of drainage – it is not caused by it.

The definition is also exclusive of a significant portion of stormwater which occurs as sub-surface runoff, referred to technically as “interflow”.

Inflection notes that the inclusion of the concept of interflow is critical to the definition because of the antidegradation requirement to replicate pre-development hydrology as part of the PCSM requirements in special protection watersheds. The procedures for characterizing pre-development hydrology were decided by the Environmental Hearing Board in 2011 in the BMPA v PADEP & Alpine Rose Motor Sports decision in which all components of stormwater flow had been required by DEP to ensure replication of water resources in special protection watersheds. The current definition is inadequate and does not provide DEP with the tools it needs to regulate stormwater in special protection watersheds.

Inflection recommends that the definition be modified to read:

Stormwater: Water flow resulting from the drainage of direct precipitation or snowmelt. The term includes both overland runoff and subsurface interflow.

Comment No. 2 Section 78.51: Water Supply Protection

In Sections 78.51 (b) and (c), PADEP has added well site construction to the list of oil and gas activities for which persons can claim a diminution of water quality. Inflection notes that the authority to include well site construction is not specified in the statutory language; i.e., the legislature did not direct PADEP to develop regulations to include well site construction. Inflection recommends that the addition of well site construction should be stricken from the proposed regulations.

Inflection Energy appreciates this opportunity to present our comments to the Environmental Quality Board.

Sincerely,

A handwritten signature in black ink, appearing to read "Thomas J. Pellegrino". The signature is fluid and cursive, with a large loop at the beginning.

Director, Regulatory, Health, Safety & Environment