Hydraulic Fracturing And Related Activities As Giving Rise To Classic Tort Claims In Pennsylvania

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ABSTRACT

In 2009, at approximately the same time that the Marcellus shale boom began, Pennsylvania saw its first lawsuits in which plaintiffs asserted claims of property damage and/or bodily injury as a result of hydraulic fracturing and associated natural gas exploration and development activities. These claims were novel in Pennsylvania. This article discusses the developing body of Pennsylvania case law addressing classic "toxic" tort claims in the context of natural gas development.

INTRODUCTION

Litigation asserting hydraulic fracturing and associated natural gas drilling and production operations caused bodily injury and property damages appears to have been first filed in Pennsylvania courts in the fall of 2009.[2] Since that time, the number of cases filed asserting that natural gas development gave rise to classic toxic tort claims has been limited when compared to the number of wells which have been hydraulically fracturing within the Commonwealth. Nevertheless, a body of

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2. Complaint, *Zimmermann* v. *Atlas*, C.D. No. 2009-7564 (Washington Cty. Ct. Com. Pl. 2009); *Fiorentino* v. *Cabot Oil & Gas Corporation*, 750 F.Supp. 2d 506, 508 (M.D. Pa. 2010) (complaint was filed on Nov. 19, 2009).

case law relating to those claims is developing.[3] This article will discuss decisions regarding negligence, strict liability, private nuisance, the Pennsylvania Hazardous Sites Cleanup Act, and medical monitoring claims. Additionally, this article will discuss the apparent difficulties in demonstrating causation.

PENNSYLVANIA LITIGATION DEVELOPMENTS INVOLVING HYDRAULIC FRACTURING AND ASSOCIATED ACTIVITIES

In *Robinson Township, Washington County, PA* v. *Commonwealth*, the Pennsylvania Supreme Court described hydraulic fracturing as follows:

> Slick-water fracking involves pumping at high pressure into the rock formation a mixture of sand and freshwater treated with a gel friction reducer, until the rock cracks, resulting in greater gas mobility. Horizontal drilling requires the drilling of a vertical hole to 5,500 to 6,500 feet—several hundred feet above the target natural gas pocket or reservoir—and then directing the drill bit through an arc until the drilling proceeds sideways or horizontally. One unconventional gas well in the Marcellus Shale uses several million gallons of water.[4]

The claims asserted by 44 plaintiffs against Cabot Oil and Gas Corporation ("Cabot") in November 2009, initially styled as *Fiorentino* v. *Cabot*, provide a case study.

The claims asserted by 44 plaintiffs against Cabot Oil and Gas Corporation ("Cabot") in November 2009, initially styled as *Fiorentino* v. *Cabot*,[5] provide a case study.[6] Plaintiffs asserted claims for negligence, private nuisance, strict liability for abnormally dangerous activities, breach of contract, fraudulent misrepresentation, and gross negligence, as well as claims for medical monitoring trusts and claims under the Pennsylvania Hazardous Sites Cleanup Act.[7] In 2012, Cabot settled with the majority of plaintiffs, and the case was restyled as *Ely* v. *Cabot*.[8] During the litigation,[9] the court struck all of the remaining plaintiffs' claims, except for negligence and private nuisance, finding them either to be legally deficient or to be unsupported by the evidentiary record.[10] The court further narrowed the case to simply the private nuisance claim during the trial, ruling that plaintiffs had not introduced evidence of the value of their properties prior to the alleged damage by Cabot's operations, meaning that a jury could not find in their favor on their negligence claims.[11] Nevertheless, the jury issued a $4.24 million verdict in favor of plaintiffs on March 10, 2016.[12] This article will explore these tort claims, as well as others sometimes asserted by plaintiffs.

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3. *See Ely* v. *Cabot Oil & Gas Corp*., 38 F.Supp. 3d 518, 523 (M.D. Pa. 2014) (stating more than 6,300 Marcellus shale wells had been drilled or were producing).
4. *Robinson Township, Washington County, PA* v. *Commonwealth*, 83 A.3d 901, 914-15 (Pa. 2013).
5. *Fiorentino*, n.2 *supra*.
6. Plaintiffs were made famous when some of their claims were included in the high-profile and controversial film *Gasland*. *See, e.g.*, Christopher Bateman, *A Colossal Fracking Mess*, Vanity Fair, June 2010 *available at* http://www.vanityfair.com/news/2010/06/fracking-in-pennsylvania-201006; Mike Soraghan, *Groundtruthing Academy Award Nominee 'Gasland'*, N.Y. Times, February 24, 2011 *available at* http://www.nytimes.com/gwire/ 2011/02/24/24greenwire-groundtruthing-academy-award-nominee-gasland-33228.html?pagewanted=all.
7. *Fiorentino*, 750 F.Supp. 2d at 508.
8. *Ely*, at 519.
9. This article will refer to the case as the *"Fiorentino/Ely"* litigation for the sake of clarity.
10. *Ely* at 533-35.
11. *See* Terrie Morgan-Besecker, *Judge Dismisses Part of Water Contamination Case*, The Times Tribune, Mar. 8, 2016 *available at* http://thetimes-tribune.com/news/judge-dismisses-part-of.water-contamination-case-1.2015962.
12. Jury Verdict, *Ely*, No. 09-CV-2284, (M.D. Pa. 2016).

Negligence Claims

Negligence claims are frequently included in lawsuits alleging damages or injuries from natural gas development. Plaintiffs have advanced three types of negligence claims: simple, *per se* and gross.

As in other contexts, simple negligence claims entail a showing of: (1) a duty recognized by law, (2) a breach of that duty, (3) a causal connection between the breach and the resulting injury, and (4) damages.[13] Simple negligence claims have generally been allowed to proceed when challenged with a dispositive motion or preliminary objections.

For example, in *Kamuck*, plaintiff asserted a variety of tort and contract claims, including a simple negligence claim.[14] The U.S District Court for the Middle District of Pennsylvania found that while plaintiff's legal theories were "murky," his negligence claim was adequately pled.[15] Similarly, in *Roth* v. *Cabot*, the U.S. District Court for the Middle District of Pennsylvania allowed simple negligence claims to proceed where plaintiffs alleged that Cabot failed to take "necessary precautions" during its operations and that releases occurred as a result of Cabot's activities.[16] "The temporal and physical proximity of the Defendants' actions to the Plaintiffs' harm, in addition to the lack of contemporaneous and alternative sources of the contamination, permit the reasonable inference that the Defendants were responsible for that harm."[17]

In contrast, claims predicated upon a negligence *per se* theory have had mixed results. Negligence *per se* allows the plaintiff to utilize a statute to establish the existence of a duty of care which plaintiff may then allege was breached.[18] In order to rely upon a given statute for that purpose:

> a plaintiff must establish that: '(1) The purpose of the statute must be, at least in part, to protect the interest of a group of individuals, as opposed to the public generally; (2) The statute or regulation must clearly apply to the conduct of the defendant; (3) The defendant must violate the statute or regulation; [and] (4) The violation of the statute must be the proximate cause of the plaintiff's injuries.'[19]

Plaintiffs have relied upon various Pennsylvania statutes for the purposes of the negligence *per se* claims: the Oil and Gas Act,[20] the Clean Streams Law,[21] the Solid Waste Management Act,[22] and the Hazardous Sites Cleanup Act.[23]

Courts have generally found that the Clean Streams Law and the Solid Waste Management Act are not intended to provide protections to individual plaintiffs. The court in *Roth* stated that the Clean Streams Law was intended to protect streams "throughout the Commonwealth" and was, therefore, not intended to protect plaintiffs and could not be used as the basis for negligence *per se* claim.[24] Similarly, the court in *Russell* v. *Chesapeake Appalachia, LLC*,[25] dismissed a negligence

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13. *Kamuck* v. *Shell Energy Holdings GP, LLC*, at 10 (M.D. Pa. 2012) 2012 WL 1463594 *adopted in part* 2012 WL 1466490 (M.D. Pa. 2012) (*quoting Kleinknecht* v. *Gettysburg College*, 989 F. 2d 1360, 1366 (3rd Cir. 1993).
14. *Id*. at 1.
15. *Id*. at 9-10.
16. 919 F.Supp. 2d 476, 487 (M.D. Pa. 2013).
17. *Id*.
18. *Fiorentino*, 750 F.Supp. 2d at 515.
19. *Roth*, 919 F.Supp. 2d at 488.
20. 58 Pa.C.S. §3201 *et seq*. (2015).
21. 35 Pa.C.S. §691.1 *et seq*. (2012).
22. 35 Pa.C.S. §6018.101 *et seq*. (2012).
23. 35 Pa.C.S. §6020.101 *et seq*. (2015).
24. *Roth*, 919 F.Supp. 2d at 488.
25. *Russell* v. *Chesapeake Appalachia, L.L.C.*, 2014 WL 6634892 (M.D. Pa. 2014).

per se claim relying upon the Solid Waste Management Act, finding that statute was intended to protect the public, not the interests of individual citizens.[26]

With regard to the Oil and Gas Act, the court in *Roth* found that one of the express purposes of the statute was to "[p]rotect the safety and property rights of persons residing within areas where mining, exploration, development, storage or production occurs" and, therefore, found the claim to be permissible.[27] Similarly, the court found that the Hazardous Sites Cleanup Act had a purpose to protect citizens from the dangers of hazardous substances and could therefore form the basis of a negligence *per se* claim.[28]

Finally, certain plaintiffs have asserted "gross negligence" claims. These efforts have been rejected on the basis that Pennsylvania does not recognize a separate cause of action for "gross," as opposed to simple, negligence.[29]

Strict Liability for Unreasonably Dangerous Activities Claims

Some plaintiffs have sought to hold natural gas exploration companies strictly liable on unreasonably dangerous activities theories. As the court observed in *Fiorentino/Ely*, Pennsylvania follows the Restatement (Second) of Torts §519, which provides:

> (1) One who carries on an abnormally dangerous activity is subject to liability for harm to the person, land or chattels of another resulting from the activity, although he has exercised the utmost care to prevent the harm.
>
> (2) This strict liability is limited to the kind of harm, the possibility of which makes the activity abnormally dangerous.[30]

Similarly, Pennsylvania follows §520 of the Restatement (Second) of Torts, which identifies the following factors to be considered in determining what constitutes an abnormally dangerous activity:

> (a) existence of a high degree of risk of some harm to the person, land or chattels of others;
>
> (b) likelihood that the harm that results from it will be great;
>
> (c) inability to eliminate the risk by the exercise of reasonable care;
>
> (d) extent to which the activity is not a matter of common usage;
>
> (e) inappropriateness of the activity to the place where it is carried on; and
>
> (f) extent to which its value to the community is outweighed by its dangerous attributes.[31]

The issue of whether hydraulic fracturing constitutes an abnormally dangerous activity to which strict liability could attach was repeatedly side-stepped by Pennsylvania Federal courts. In what appears to be the first Pennsylvania case to address the issue, *Fiorentino/Ely*, the court declined to decide the matter in ruling on a motion to dismiss.[32] The court reasoned that, while the determination of whether an activity was abnormally dangerous was to be made by the court as a matter of law, the lack

26. *Id*. at 4.
27. *Roth*, 919 F.Supp. 2d at 489 (*citing* 58 Pa.C.S.A. §3202(3)) (2015).
28. *Id*. at 488-89.
29. *Fiorentino*, 750 F.Supp. 2d. at 513; *Kamuck*, 2012 WL 1463594, at *10.
30. *Fiorentino*, 750 F.Supp. 2d. at 512 (*citing* Restatement (Second) of Torts §519 (1977)).
31. Restatement (Second) of Torts §520 (1977).
32. *Fiorentino*, 750 F.Supp. 2d at 511-512.

of a record before it prevented it from making an "informed decision."[33] Consequently, it deferred its decision.[34] Subsequently, the same court relied upon the *Fiorentino/Ely* decision to decline to decide the issue in at least three additional cases: *Berish* v. *Southwestern Energy Production Company*,[35] *Roth*,[36] and *Kamuck*.[37]

However, in 2014, the court in *Fiorentino/Ely* revisited the issue on a motion for summary judgment.[38] The court weighed Section 520's six factors and found that all six weighed in Cabot's favor and against a determination that hydraulic fracturing constitutes an abnormally dangerous activity to which strict liability should attach.[39] In particular, the court, adopting the magistrate judge's report and recommendation, found that "the evidence in the record developed by the parties contains numerous citations to governmental reports, data analysis, and expert commentary attesting to the Defendants' position that the risks from a properly drilled, cased and hydraulically fractured gas well are minimal."[40] Further, the court noted that the evidence presented by plaintiffs, in support of their contentions of high risk inherent in hydraulic fracturing, itself instead supported the argument that Cabot's particular operations at the site in question were negligent and therefore risky.[41] The court found that hydraulic fracturing was common in Pennsylvania as 99.5% of wells permitted in the Commonwealth since 2009 had been hydraulically fractured and more than 9,800 wells had been permitted in that time.[42] Relying upon statutory setbacks providing distances between structures, water supplies and water bodies, on the one hand, and hydraulic fracturing activities, on the other, the court determined that Cabot's drilling operations were conducted in an appropriate area as Cabot had complied with the pertinent setbacks.[43] Finally, the court concluded that the dangers associated with natural gas activities were outweighed by their economic value, pointing to increased property values, royalty payments, leasing income, and jobs.[44]

Thereafter, relying in part upon the *Fiorentino/Ely* decision, the court in *Kamuck* rejected the plaintiff's claim that strict liability should attach to natural gas development activities.[45] The court also noted that in other "closely-related factual contexts" Pennsylvania courts had "rebuffed" efforts to have oil and gas activities labeled as ultra-hazardous.[46]

Trespass Claims

Another claim which may be asserted by plaintiffs seeking to recover for alleged damages caused by hydraulic fracturing and associated operations is trespass. Trespass is "an unprivileged, intentional intrusion upon land in possession of another."[47] However, where plaintiffs have authorized operations on their own prop-

33. *Id*. at 512.
34. *Id*.
35. *Berish* v. *Southwestern Energy Production Company*, 763 F.Supp. 2d. 702, 705-707 (M.D. Pa. 2011).
36. *Roth*, 919 F.Supp. 2d at 497-98.
37. *Kamuck*, 2012 WL 1463594 at 12.
38. *Ely*, 38 F.Supp. 3d at 519.
39. *Id*. at 533-34.
40. *Id*. at 529.
41. *Id*. at 529-30.
42. *Id*. at 532.
43. *Id*.
44. *Id*. at 532-34.
45. *Kamuck*, 2015 WL 1345235 at 17-18.
46. *Id*. at 17 (*citing Melso* v. *Sun Pipe Line Co*., 576 A.2d 999, 1003 (Pa. Super. 1990) and *Smith* v. *Weaver*, 665 A.2d 1215, 1219 (Pa. Super. 1995)).
47. *Roth*, 919 F.Supp. 2d at 492, *quoting United States* v. *Union Corp*., 277 F.Supp. 2d 478, 495 (E.D. Pa. 2003).

erties through oil and gas leases, the likelihood of success on a typical trespass claim is limited.

In *Roth*, the court dismissed plaintiffs' trespass claims.[48] "The Defendants contend . . . that the Plaintiffs' claim necessarily fails because the Defendants were at all times in lawful possession of the property. On this claim, we agree with the Defendants."[49] Because Cabot was properly on the premises for the purposes of its operations, there could be no unlawful intrusion.[50] The court further reasoned that there were other ways plaintiffs could recover for their alleged wrongs: "The law offers copious other means for the Plaintiffs to seek redress for their alleged harms, including the causes of action hereinabove permitted to proceed, and we decline to add to that arsenal by needlessly extending the Commonwealth's long-established law of trespass."[51]

Private Nuisance Claims

Another claim asserted by plaintiffs is private nuisance. Pennsylvania follows the Restatement (Second) of Torts with regard to private nuisance,[52] specifically Section 822 which provides:

> One is subject to liability for a private nuisance if, but only if, his conduct is a legal cause of an invasion of another's interest in the private use and enjoyment of land, and the invasion is either
>
> (a) intentional and unreasonable, or
>
> (b) unintentional and otherwise actionable under the rules controlling liability for negligent or reckless conduct, or for abnormally dangerous conditions or activities.[53]

In order to state a claim for private nuisance, plaintiffs have averred that defendants allowed substances used or produced during their operations to travel onto plaintiffs' properties or that the defendants' operations caused excessive light and noise to interrupt their enjoyment of their properties.[54]

For example, the plaintiff in *Kamuck* alleged that noise and dust interference, as well as "potentially toxic fracking fluids has (sic) been sprayed, drained, and released on or near his property in ways which have tainted the ground water and streams on his land." The court found that averment to be sufficient to state a claim for nuisance.[55]

Similarly, in *Butts* v. *Southwestern Energy Production Co*., the court rejected defendant's motion for summary judgment on plaintiffs' private nuisance claim asserting excessive noise and light.[56] Southwestern argued that there was undisputed evidence that it had complied with the county subdivision and land use ordinance, which it argued represented community standards for noise and light.[57] The court

48. *Id*.
49. *Id*.
50. *Id*.
51. *Id*. at 493.
52. *Youst* v. *Keck's Food Service, Inc*., 94 A.3d 1057, 1072 (Pa. Super. 2014).
53. Restatement (Second) Torts §822 (1979).
54. *See, e.g., Ely* v. *Cabot Oil & Gas Corporation*, 2014 WL 7508091, 17-18 (M.D. Pa. 2014), *adopted in part by* 2015 WL 140033 (2015) *appeal dismissed* (3rd Cir. 15-1439) (2015); *Butts* v. *Southwestern Energy Production Co*., 2014 WL 3953155, 3 (M.D. Pa. 2014); *Kamuck*, 2012 WL 1463594 at 14.
55. *Kamuck*, 2012 WL 1463594 at 14.
56. *Butts*, 2014 WL 3953155 at 3.
57. *Id*.

rejected this position, stating that the trier of fact should be allowed to determine whether Southwestern's operations created a significant invasion of the enjoyment of plaintiffs' properties.[58]

In the *Fiorentino/Ely* matter, the court rejected Cabot's efforts to obtain judgment on plaintiffs' nuisance claims.[59] There, Cabot contended that certain plaintiffs had not demonstrated a "significant harm" resulting from its operations for which it could be liable under Restatement (Second) of Torts §821F, which defines significant harm as a "harm of importance" or which causes "a real and appreciable interference" with plaintiffs' enjoyment of the property.[60] The court found that plaintiffs' experts' statements of water contamination were sufficient to allow their nuisance claims to proceed.[61]

Strict Products Liability Claims

In at least one hydraulic fracturing-related lawsuit, plaintiffs have sought to hold defendants liable on the basis of strict products liability.[62] To date, no Pennsylvania court has addressed a strict products liability claim related to hydraulic fracturing operations in a reported decision.[63]

Therefore, these cases will presumably follow Pennsylvania law on strict products liability generally. In the much-awaited case of *Tincher* v. *Omega Flex, Inc.*,[64] the Pennsylvania Supreme Court clarified the state of Pennsylvania law. There, the Court declined to adopt the Restatement (Third) of Torts, instead holding that Restatement (Second) §402A continues to be the law in Pennsylvania.[65] Restatement (Second) §402A provides:

> (1) One who sells any product in a defective condition unreasonably dangerous to the user or consumer or to his property is subject to liability for physical harm thereby caused to the ultimate user or consumer, or to his property, if
>
> (a) the seller is engaged in the business of selling such a product, and
>
> (b) it is expected to and does reach the user or consumer without substantial change in the condition in which it is sold.
>
> (2) The rule stated in Subsection (1) applies although
>
> (a) the seller has exercised all possible care in the preparation and sale of his product, and
>
> (b) the user or consumer has not bought the product from or entered into any contractual relation with the seller.[66]

Under the Restatement (Second) provisions of strict products liability, a seller, manufacturer or distributor is liable for harm to a user caused by an unreasonably dangerous or defective product.[67] Under the *Tincher* decision, a jury is to decide

58. *Id*. at 3-4.
59. *Ely*, 2014 WL 7508091 at 17-18,
60. *Id*. at 17. Cabot also argued that certain plaintiffs' nuisance claims failed because they did not own the property. The court rejected that position finding it to be sufficient that the plaintiffs were possessors of the land. *Id*. at 18.
61. *Id*.
62. Complaint, *Haney*, C.D. No. 2012-3534 (May 25, 2012).
63. In the *Haney* litigation, the court denied preliminary objections seeking to dispose of strict products liability claims without issuing a decision detailing her reasons for doing so. Order on Preliminary Objections, *Haney*, C.D. No. 2012-3534 (Washington Cty. Ct. Com. Pls. 2013).
64. *Tincher* v. *Omega Flex, Inc.*, 104 A.3d 328 (Pa. 2014).
65. *Id*. at 415.
66. Restatement (Second) Torts §402A (1965).
67. *Tincher*, 104 A.3d at 371.

whether the product is in a "defective condition unreasonably dangerous" to the user or consumer.[68]

Pennsylvania Hazardous Sites Cleanup Act Claims

In addition to asserting negligence *per se* claims based upon the Hazardous Sites Cleanup Act,[69] plaintiffs have also asserted direct claims against defendants on the basis on the statute:

> To establish a *prima facie* case of liability under the Pennsylvania HSCA, a plaintiff must plead facts establishing that: "(1) defendants are responsible parties; (2) there has been an actual or threatened 'release' of a hazardous substance from a site; (3) 'response costs' were or will be incurred; and (4) the responses costs were 'reasonable and necessary or appropriate.' . . .".[70]

The Hazardous Sites Cleanup Act defines a "hazardous substance" as:

> [a]ny element, compound or material which is:
>
> (i) Designated as a hazardous waste under the act of July 7, 1980 (P.L. 380, No. 97), known as the Solid Waste Management Act, and the regulations promulgated thereto.
>
> (ii) Defined or designated as a hazardous substance pursuant to the Federal Superfund Act.
>
> (iii) Contaminated with a hazardous substance to the degree that its release or threatened release poses a substantial threat to the public health and safety or the environment as determined by the department.
>
> (iv) Determined to be substantially harmful to public health and safety or the environment based on a standardized and uniformly applied department testing procedure and listed in regulations proposed by the department and promulgated by the Environmental Quality Board.[71]

Natural gas is expressly excluded from the definition.[72]

Courts have addressed claims in this context in at least two instances. First, in *Fiorentino/Ely*, plaintiffs' claims were allowed to proceed beyond Cabot's motion to dismiss.[73] Cabot argued that plaintiffs had failed to give 60 days' notice required under Section 1115.[74] Plaintiffs, on the other hand, contended that they brought suit under Section 702 relating to response costs, and notice was, therefore, not required.[75] The court found that plaintiffs had sufficiently pled that they had response costs as a result of their alleged exposures to substances they contended Cabot had released in conjunction with its operations near their homes.[76]

Similarly, in *Roth*, the court allowed plaintiffs' claims to survive Cabot's motion to dismiss.[77] There, Cabot claimed that plaintiffs had failed to adequately plead the claim because plaintiffs had not specifically identified the hazardous substances they alleged Cabot released.[78] The court disagreed, finding that the averments that

68. *Id*. at 426-31.
69. 35 P.S. §§6020.101-6020.1305 (2012).
70. *Roth*, 919 F.Supp. 2d at 484 (*quoting In re Joshua Hill, Inc*., 294 F.3d 482, 485 (3d Cir. 2002)).
71. 35 P.S. §6020.103 (2012).
72. *Id*.
73. *Fiorentino*, 750 F.Supp. 2d at 510.
74. *Id*.
75. *Id*. at 511
76. *Id*.
77. *Roth*, 919 F.Supp. 2d at 486.
78. *Id*. at 484.

hydraulic fracturing fluids were discharged into the ground and that the groundwater contained various contaminants were sufficient to allege the release of hazardous substances for the purposes of pleading a Hazardous Sites Cleanup Act claim.[79] The court stated that these discharges "might well contain 'hazardous substances to the degree that its release or threatened release poses a substantial threat to the public health and safety or the environment.'"[80] The court also rejected Cabot's claim that the specific dates and places where the alleged releases occurred needed to be pled, instead finding it sufficient that one could infer the timing and locations from the amended complaint.[81]

Medical Monitoring

Another recovery mechanism sought by some plaintiffs is a medical monitoring trust. As discussed by the court in *Fiorentino/Ely*:

> The Pennsylvania Supreme Court has articulated seven elements a plaintiff must establish to prevail on a claim for medical monitoring:
>
> (1) exposure greater than normal background levels;
>
> (2) to a proven hazardous substance;
>
> (3) caused by defendant's negligence;
>
> (4) as a proximate result of the exposure, plaintiff has a significantly increased risk of contracting a serious latent disease;
>
> (5) a monitoring procedure exists that makes the early detection of the disease possible;
>
> (6) the prescribed monitoring regime is different from that normally recommended in the absence of the exposure; and
>
> (7) the prescribed monitoring regime is reasonably necessary according to contemporary scientific principles.[82]

In *Fiorentino/Ely*, the court rejected Cabot's motion to dismiss medical monitoring claims.[83] The court found allegations that toxic substances were used in close proximity to plaintiffs' homes resulting in "neurological, gastrointestinal, and dermatological symptoms and blood study results consistent with toxic exposure" sufficient to meet pleading requirements.[84]

Causation Issues

Few cases in this context have reached a trier of fact. However, some which have progressed beyond early litigation stages are indicative of potential problems in proving causation. *Kiskadden* v. *DEP*[85] is illustrative of these difficulties.[86] There, in June 2011, Loren Kiskadden ("Kiskadden") complained to the Pennsylvania Department of Environmental Protection ("DEP") that Range Resources-Appalachia, LLC's

79. *Id*. at 485.
80. *Id*.
81. *Id*. at 485-86.
82. *Fiorentino*, 750 F.Supp. 2d at 513 (citations omitted).
83. *Id*.
84. *Id*.
85. *Loren Kiskadden* v. *Commonwealth of Pennsylvania, Department of Environmental Protection and Range Resources–Appalachia, LLC, Permittee*, 2015 WL 3798582 (Pa. Env. Hrg. Bd. June 12, 2015).
86. Kiskadden is also a party to the *Haney* civil lawsuit currently pending before the Washington County Court of Common Pleas at C.D. No. 2012-3534.

("Range") operations at its Yeager well site, approximately 2,900 feet from his property, had contaminated his ground and drinking water supply.[87] DEP investigated Kiskadden's complaint and, in a September 2011 letter, concluded that Range had not contaminated his water supply.[88] Kiskadden appealed the letter to the Pennsylvania Environmental Hearing Board ("EHB"), alleging that DEP's determination was erroneous and that he had been exposed to various pollutants as a result of Range's operations.[89]

Kiskadden's appeal was heard by the EHB beginning in late September 2015.[90] During the hearing, Kiskadden introduced evidence of numerous releases at the Yeager site, causing the EHB to note that it was "clear from the evidence presented by Mr. Kiskadden at trial that problems existed at the Yeager site."[91] Further, as a result of a discovery sanction based upon "Range's failure to produce information about the products used in its operation in discovery, in violation of a Board order, the Board granted Mr. Kiskadden a rebuttable presumption that the constituents found in his well were also present at the Yeager site."[92]

Nevertheless, even with the presumption, the EHB found that Kiskadden was unable to prove causation.[93] According to the EHB, Kiskadden had to demonstrate a hydrogeological connection between the Yeager site and his water well.[94] In order to do so, Mr. Kiskadden introduced expert testimony of Paul Rubin, a hydrogeologist.[95] However, the EHB rejected Mr. Rubin's testimony of hydrogeological connection as being "conclusory and difficult to follow."[96] The EHB further denied that the data supported Mr. Rubin's conclusions.[97]

In the face of the difficulties in demonstrating causation, the U.S. District Court for the Middle District of Pennsylvania has allowed plaintiffs to employ a statutory rebuttable presumption.[98] With regard to unconventional wells, the Pennsylvania Oil and Gas Act provides:

> **(c) Presumption.—**Unless rebutted by a defense established in subsection (d), it shall be presumed that a well operator is responsible for pollution of a water supply if:
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> ****
>
> (2) in the case of an unconventional well:
>
> (i) the water supply is within 2,500 feet of the unconventional vertical well bore; and
>
> (ii) the pollution occurred within 12 months of the later of completion, drilling, stimulation or alteration of the unconventional well.[99]

87. *Kiskadden*, 2015 WL 3798582 at 1.
88. *Id*. at 10.
89. *Id*. at 3; *see also* Notice of Appeal, No. 2011-149-R (Oct. 7, 2011) *available at* http:// ehb.courtapps.com/efile/documentViewer.php?documentID=10968.
90. Scheduling Order, *Kiskadden*, EHB Docket No. 2011-149-R, (May 5, 2014) *available at* http://ehb.courtapps.com/public/document_shower_pub.php?csNameID=4351.
91. *Kiskadden*, 2015 WL 3798582 at 2.
92. *Id*. at 17.
93. *Id*.
94. *Id*.
95. *Id*. at 20.
96. *Id*.
97. *Id* at 21-23.
98. *Butts*, 2014 WL 3953155; *Ely*, 2016 WL 454817.
99. 58 Pa.C.S.A. §3218(c). In a prior version of the statute, fault was presumed subject to rebuttal if the water source was within 1,000 feet of the well and within 6 months of the well being drilled. The former act of December 19, 1984 (P.L.1140, No.223), known as the Oil and Gas Act.

One means of rebutting the presumption is the use of a "predrill" water sample collected prior to the natural gas company's drilling of the well, which is later used to show that the company's operations have not materially changed the landowner's water quality.[100]

In *Roth*, the court allowed the use of the rebuttable presumption for purposes of pleading causation.[101] In *Butts*, at summary judgment, the court held that plaintiffs could rely upon the rebuttable presumption in lieu of expert testimony to show causation.[102] Finally, in the *Fiorentino/Ely* case, the court specifically allowed the use of the presumption, rejecting Cabot's position that the presumption was not intended to give rise to claims by private litigants as opposed to being used exclusively for administrative agency enforcement actions.[103]

CONCLUSION

Since 2009, the courts have had occasion to apply typical tort causes of action in the context of hydraulic fracturing and associated activities. While case law continues to be somewhat limited, certain trends have emerged and will continue to develop as the natural gas industry thrives in Pennsylvania.

100. 58 Pa.C.S.A. §3218(d)(2)(i).
101. *Roth*, 919 F.Supp. 2d at 487.
102. *Butts*, 2014 WL 3953155, at *5-7.
103. *Ely*, 2016 WL 454817 at 7-10.