



COMMONWEALTH OF PENNSYLVANIA  
ENVIRONMENTAL HEARING BOARD

<b>THE DELAWARE RIVERKEEPER</b>	:	
<b>NETWORK, CLEAN AIR COUNCIL,</b>	:	
<b>DAVID DENK, JENNIFER CHOMICKI</b>	:	
<b>ANTHONY LAPINA and JOANN GROMAN</b>	:	
	:	
<b>v.</b>	:	<b>EHB Docket No. 2014-142-B</b>
	:	<b>(Consolidated with 2015-157-B)</b>
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<b>COMMONWEALTH OF PENNSYLVANIA,</b>	:	
<b>DEPARTMENT OF ENVIRONMENTAL</b>	:	
<b>PROTECTION and R.E. GAS</b>	:	
<b>DEVELOPMENT, LLC</b>	:	<b>Issued: May 11, 2018</b>

**ADJUDICATION**

**By Steven C. Beckman, Judge**

**Synopsis**

The Board denies the consolidated appeals challenging the Department’s issuance to R.E. Gas Development, LLC of well permits and renewal permits for six unconventional gas wells. The Appellants, Delaware Riverkeeper Network, Clean Air Council, David Denk, Jennifer Chomicki, Anthony Lapina and Joann Groman failed to demonstrate that the Department acted unreasonably or in violation of either the 2012 Oil and Gas Act or any other relevant statutes or regulations. Appellants also failed to demonstrate that the Department’s decision to issue the well permits and renewal permits violated the Department’s responsibilities under Article 1, Section 27 of the Pennsylvania Constitution.

**Background**

On September 12, 2014, the Pennsylvania Department of Environmental Protection (“the Department” or “DEP”) approved permits for six unconventional gas wells (“Geyer Wells”) at a property in Middlesex Township, Butler County, Pennsylvania (“Geyer Well Site”). The permits

were issued to R.E. Gas Development, LLC (“Rex”). Two environmental groups, the Delaware Riverkeeper Network and the Clean Air Council, along with four individuals, David Denk, Jennifer Chomicki, Anthony Lapina and Joann Groman (collectively “Appellants” or “Delaware Riverkeeper”) filed an appeal of the Department’s approval of the six Geyer Wells permits on October 13, 2014, and filed an amended appeal on November 3, 2014. On September 11, 2015, the Department renewed all six of the Geyer Wells permits under appeal and the Appellants, with the exception of Mr. Lapina, filed an appeal of the permit renewals on October 16, 2015. On October 23, 2015, the Board issued an Order consolidating the two appeals into the above-captioned matter.

In December 2015, Rex began drilling at the Geyer Well Site. Appellants filed an Application for Temporary Supersedeas and a Petition for Supersedeas on December 14, 2015. The Board held a two day supersedeas hearing on January 6 and 7, 2016 (“Supersedeas Hearing”). On January 29, 2016, the Board issued an Order denying the Appellants’ Petition for Supersedeas followed by an Opinion in Support of the Order Denying Petition For Supersedeas on February 4, 2016. The matter then proceeded through discovery and the filing of pre-hearing memoranda. A hearing was held in this matter on December 13 through 16, 2016, at the Board’s facility in Erie, Pennsylvania (“December 2016 Hearing”). Delaware Riverkeeper filed its Proposed Findings of Fact, Conclusions of Law, and Post-Hearing Brief on March 27, 2017. The Department filed its Post-Hearing Brief and Rex filed its Post-Hearing Memorandum on June 5, 2017. Delaware Riverkeeper followed by filing its Post-Hearing Reply Brief on June 20, 2017, the same day that the Pennsylvania Supreme Court issued its decision in *Pa. Env’tl. Def. Found. v. Commonwealth*, 161 A.3d 911 (Pa. 2017) (“*PEDF*”). On June 21, 2017, the Board ordered the parties to file a round of supplemental briefs addressing the impact of the Supreme Court’s

*PEDF* decision. The supplemental briefing by the parties concluded in this matter on August 21, 2017. The parties agreed that the record for this matter would consist of the stipulations, testimony and exhibits from both the Supersedeas Hearing held in January 2016 and the December 2016 Hearing.<sup>1</sup>

## FINDINGS OF FACT

### The Parties

1. The Department is the agency with the duty and authority to administer and enforce the Oil and Gas Act, Act of February 14, 2012, P.L. 87, No. 13, 58 Pa. C.S. §3201- 3274 ("2012 Oil and Gas Act"); the Clean Streams Law, Act of June 22, 1937, P.L. 1987, *as amended*, 35 P.S. §§ 691.1 – 691.1001 ("Clean Streams Law"); Section 1917-A of the Administrative Code of 1929, Act of April 9, 1929, P.L. 177, as amended, 71 P. S. §510-17 ("Administrative Code"); and the rules and regulations promulgated thereunder ("Regulations").

2. The permittee, Rex, is a well operator engaged in various oil and gas well activities in Pennsylvania. Rex’s business address is 366 Walker Drive, State College, PA 16801-7639. (DEP Ex. 1)

3. The Delaware Riverkeeper Network (“DRN”) is a non-profit organization established in 1988 to protect and restore the Delaware River, its associated watershed, tributaries, and habitats. (Jt. Stip. – Standing, Para. 15)

4. The Clean Air Council is a non-profit organization started in 1967 with a mission to protect everyone’s right to breathe clean air. (Jt. Stip. – Standing, Para. 13)

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<sup>1</sup> All references to stipulations, testimony and exhibits from the Supersedeas Hearing will be preceded by the prefix “S,” i.e. a reference to a page in the supersedeas transcript will be identified as “S. T.xx ”.

5. Individual Appellants David Denk, Jennifer Chomicki and Anthony Lapina reside with their families in Weatherburn Heights, a residential development east of the Geyer Well Site. (Jt. Stip. – Standing, Para. 2)

6. Individual Appellant Joanne Groman lives approximately 1.3 miles north-northeast of the Geyer Well Site and relies on well water that she is concerned will be impacted by the Geyer Wells. (Jt. Stip. – Standing, Para. 10 and 11)

7. Mr. Denk, Ms. Chomicki, Mr. Lapina, and Ms. Groman are all members of Delaware Riverkeeper Network and the Clean Air Council. (Jt. Stip. – Standing, Para. 12)

8. Four schools in the Mars Area School District with elementary through high school age students are located northwest of the Geyer Well Site. (Jt. Stip. – Standing, Paras. 3-7)

9. The four schools are located between approximately a half mile and a mile from the Geyer Well Site. (T. 379, DEP Ex. 1)

### **Geyer Wells**

10. In early April, 2014, Rex submitted permit applications to the Department to drill and operate six unconventional wells on the Geyer Well Site located in Middlesex Township, Butler County, Pennsylvania. (DEP Ex. 1, 2)

11. On September 12, 2014, the Department issued Rex well permits to drill and operate six unconventional gas extraction wells identified as Geyer Unit 1H through Geyer Unit 6H at the Geyer Well Site. (“Geyer Wells Permits” or “Permits”) (S DRN Ex. 1)

12. In August 2015, Rex submitted requests to renew all six of the Geyer Wells Permits and on September 11, 2015, the Department renewed all six of the Geyer Wells Permits for a one year period. (“Renewal Permits”) (S DRN Ex. 2; DRN Ex. A-71, A-73, A-75)

13. The Geyer Wells Permits and the Renewal Permits for three of the Geyer Wells, the Geyer Unit 1H, Geyer Unit 2H, and Geyer Unit 6H expired before any drilling for those wells took place. (T. 808)

14. Drilling of the Geyer Unit 3H and Geyer Unit 5H wells by Rex began in June 2015 with the drilling and placement of the conductor pipe at a depth of 120 feet. (DEP Ex. 20, 21)

15. Additional drilling and completion activities for the Geyer Unit 3H and 5H wells took place in December 2015, April 2016, and July 2016. (DEP Ex. 20, 21, 22, 23)

16. The Geyer Unit 3H and 5H wells began production of natural gas on or around August 9, 2016, and remained in production at the time of the December 2016 Hearing. (T. 868-869)

17. The Geyer Unit 4H well was drilled to 120 feet and the conductor pipe was installed in June 2015, but no further drilling or completion activities took place at the Geyer Unit 4H well and it was plugged in May 2016. (T. 808-809; DEP Ex. 19; DRN Ex. A-72)

### **Permit Application Review**

18. Three Department staff, Susan Price, Brian Babb and Craig Lobins were involved on behalf of the Department in the review of Rex's initial permit applications for the Geyer Wells. (T. 194, 209)

19. Ms. Price is a Geologic Specialist and is responsible for the review of drilling permit applications, notices of intent to plug and aquifer test plans. (T. 719-720)

20. Ms. Price was assigned to complete the technical review of the Geyer Wells permit applications by Mr. Babb. (T. 736)

21. Mr. Babb is the Oil and Gas Permits Chief for the Northwest Regional Office of the Department and is responsible for further reviewing the permit applications after they are reviewed by the technical review staff to make sure things were not missed during the application process. (T. 190)

22. If Mr. Babb determines that everything is okay to issue the well permit, he instructs the clerical staff to prepare the actual well permit document for Mr. Lobins to sign. (T. 190)

23. Mr. Lobins is the Northwest District Oil and Gas Manager and is responsible for oil and gas permitting decisions in the 27 northern tier counties of Pennsylvania and oil and gas operations and compliance matters in the 12 northwest counties of Pennsylvania. (T. 752)

24. Mr. Lobins is the final decision maker for the Department on the issuance of oil and gas permits in the region for which he is responsible, as well as for compliance orders and notices of violations related to permits issued by the Oil and Gas Program. (T. 752, 753)

25. Ms. Price commenced her technical review of the initial Geyer Wells permit applications after Department clerical staff completed an administrative review of the applications. (T. 736, 739)

26. Ms. Price's technical review of the initial Geyer Wells permit applications consisted of reviewing the information presented by Rex in the application and ensuring that it was internally consistent and demonstrated compliance with the regulations and the law. (T. 736-741)

27. Beyond the siting criteria required in the law and regulations and set forth in the permit application, Ms. Price did not consider any site-specific considerations such as the

landscape, topography or meteorological conditions at the Geyer Well Site during her technical review of the initial Geyer Wells permit applications. (T. 723-724)

28. Ms. Price was not familiar with and did not consider the air emissions associated with shale gas extraction activities during her technical review of the initial Geyer Wells permit applications. (T. 725)

29. Ms. Price was aware during her technical review that there are various technical requirements for well operators to case and cement wells to isolate the wellbore from any aquifer and expected that the well operators will comply with those requirements. (T. 750)

30. The Department received a number of objections and comments during its review of the initial permit applications for the Geyer Wells. (T. 742, 786-87; DRN Ex. A-76)

31. During her review, Ms. Price received objections to the initial Geyer Wells permit applications, many via e-mail that she printed out and reviewed with Mr. Babb. (T. 742)

32. Ms. Price did not research any health concerns raised by the community as part of her technical review of the initial Geyer Wells permit applications. (T. 725)

33. A group of concerned citizens known as the “Mars Parent Group” along with other individuals provided objections and comments to the Department during the Department’s review of the initial Geyer Wells permit applications. (T. 742, 786-87; DRN Ex. A-76)

34. Ms. Price determined that the initial Geyer Wells permit applications met all of the requirements for issuing a permit pursuant to the Oil and Gas Act and the regulations. (T. 747; DEP Ex. 1, 2)

35. Following Ms. Price’s technical review, Mr. Babb reviewed the initial Geyer Wells permit applications to ensure that they were internally consistent, complied with the law

and regulations and that nothing was missed in the technical review by Ms. Price. (T. 190, 198-203)

36. Mr. Babb's involvement in the review of the initial Geyer Wells permit applications was considerably greater than normal because of number of comments received by the Department regarding the permit applications. (T. 240; DRN Ex. A-76)

37. Mr. Babb's review of permit applications for well drilling permits does not include an assessment regarding the need for a permit under the Pennsylvania Air Pollution and Control Act ("APCA"). (T. 244)

38. Mr. Babb did not assess the impact of the Geyer Wells on air quality as part of his permit review. (T. 213)

39. During the review of the permit applications, Rex provided the Department with copies of several plans addressing the Geyer Well Site, including the Preparedness, Prevention and Contingency Plan, Emergency Response and Emergency Action Plans, Casing and Cementing Plan and Containment Plan. (T. 213-214, T. 879-880; Rex Ex. P-22).

40. Mr. Babb reviewed the emergency response plans submitted by Rex and compared them to the requirements for those plans found at Chapter 78.55 of the oil and gas regulations. (T. 245)

41. Mr. Babb read some of the health studies that were included in the comments received by the Department on the Geyer Wells permit applications. (T. 220-221; 223)

42. Mr. Babb discussed the public comments received by the Department with Ms. Price and Mr. Lobins. (T. 239)

43. Mr. Babb was primarily responsible for determining what special conditions were added to the Geyer Wells Permits. (T. 196-198)

44. Mr. Babb concluded that the initial Geyer Wells permit applications met the requirements of the oil and gas regulations and the 2012 Oil and Gas Act. (T. 246)

45. Mr. Lobins was responsible for the decision to issue the Geyer Wells Permits and he signed the Geyer Wells Permits on behalf of the Department. (T. 764, 786; S. DRN Ex. 1)

46. Mr. Lobins discussed the Geyer Wells permit applications with Ms. Price, Mr. Babb and Department central office staff. (T. 770-771)

47. The Regulations contain certain requirements governing actions of a well operator, like Rex, that are designed to protect the environment and reduce the potential problems that may occur during natural gas drilling activities including casing and cementing requirements, waste handling and spill control requirements, a requirement to have a blowout preventer on the well and quarterly mechanical integrity testing of the well casing. (T. 810-818)

48. The Department relies on the Regulations governing the drilling and construction of a well and the operator's compliance with the Regulations in determining that a well permit should be issued. (T. 818-819)

49. The Department communicated with and met with Rex regarding the public comments it was receiving about the Geyer Well permit applications. (T. 234-235, 802; DRN Ex. A-82)

50. Mr. Lobins also met with individual members of the Mars Parent Group, specifically Ms. Amy Nassif, on several occasions. (T. 802-03)

51. On July 15, 2014, at the request of the Mars Parent Group, the Department participated in a conference with the Mars Parents Group and Rex in accordance with Section 3251(a) of the 2012 Oil and Gas Act ("3251 Conference"). (T. 803)

52. On August 8, 2014, Rex provided a written response to the Department addressing the concerns raised by the Mars Parent Group during the 3251 Conference. (T. 805; DEP Ex. 7)

53. In Rex's August 8, 2014 response, Rex outlined several actions it was prepared to take at the Geyer Well Site to address public concerns if it received the requested permits. (DEP Ex. 7)

54. On September 12, 2014, the Department issued the Geyer Wells Permits to Rex for the proposed unconventional wells at the Geyer Well Site. The Permits were good for one year from the date of issuance. (S. DRN Ex. 1)

55. The Department included special permit conditions in the Geyer Wells Permits to address some of the issues raised by the public comments, specifically noise concerns and air emissions. (T. 772; S. DRN Ex. 1)

56. A special permit condition addressing noise required Rex to implement necessary noise mitigation measures, including sound abatement walls during drilling and completion of the Geyer Wells and further provided that if Rex's operations created a public nuisance, the Department could require additional remedial measures to abate the nuisance. ( S. DRN Ex. 1)

57. A special permit condition addressing air emissions required Rex to minimize releases to the atmosphere during flowback and subsequent recovery by capturing fluids and gas coming back from the wellbore rather than allowing them to be discharged to the atmosphere, or if the gas could not be directed to a flow line, to direct them to a complete combustion device. (T. 806; S. DRN Ex. 1)

58. The method of handling the releases during flowback to minimize air emissions is known as a “green completion” and was not required under federal regulations at the time the Department was considering the Geyer Wells permit applications. (T. 806-807)

59. In a letter signed by Mr. Lobins, addressed to the Mars Parents Group and dated September 12, 2014 (the same day the Department issued the Geyer Wells Permits) (“the September 2014 Letter”), the Department discussed the outcome of the 3251 Conference and provided its response to concerns raised by the Mars Parents Group in the 3251 Conference. (DEP Ex. 12)

60. In the September 2014 Letter, the Department acknowledged that no agreements were reached among the parties at the 3251 Conference, but went on to summarize commitments from Rex to address certain issues discussed during the 3251 Conference. Rex’s commitments, as summarized by the Department in the September 2014 Letter, included:

- a. Utilization of EPA-approved green completion technologies in accordance with 40 CFR § 60.5375(a) and not flaring during completion operations;
- b. Erection of sound abatement walls to mitigate operations-related noise;
- c. Work with the Mars Area School District to schedule completion operations during non-school hours;
- d. Perform outreach with various interested parties, and governing bodies, to promote communication of the Project through the various stages of development;
- e. Consult with local first-responders and provide additional training, if requested.
- f. Evaluate the use of additional air monitoring equipment; and
- g. Regularly communicate with the Mars Area School District.

(DEP Ex. 12)

61. On August 14, 2015, the Department received requests from Rex to renew the Geyer Wells Permits. (S. DRN Ex. 2)

62. On or about September 1, 2015, the Department became aware of concerns for potential abandoned wells near the Geyer Well Site. (T. 743)

63. On September 4, 2015, the Department requested that Rex provide information regarding the location of abandoned wells near the Geyer Well Site. (T. 743-744; DEP Ex. 15)

64. On September 9, 2015, the Department received a report dated April 22, 2014, and prepared by Moody and Associates for Rex summarizing the results of an investigation and review into the potential presence of abandoned or orphaned wells in the area of the Geyer Well Site. (“Abandoned Well Report”). (T. 745; DEP Ex. 16)

65. Ms. Price reviewed the Abandoned Well Report with Mr. Babb and the Department requested that Rex address additional concerns following the review of the Abandoned Well Report. (T. 745; DEP Ex. 16)

66. The Department was satisfied with Rex’s response regarding the abandoned wells near the Geyer Well Site. (T. 749)

67. On September 11, 2015, the Department issued the Renewal Permits for a one year term with the same special conditions as the original Geyer Wells Permits. (T. 749, 795; S. DRN Ex. 2)

68. The Renewal Permits were signed by John Ryder, who is Mr. Lobins’ boss, rather than Mr. Lobins because Mr. Lobins was on leave on September 11, 2015. (T. 795)

### **Water Issues**

69. The Geyer Wells are not located in a Special Protection High Quality or Exceptional Value watershed or within a defined 100 year floodplain, or within 100 feet of the

top of the bank of a perennial stream or within 50 feet of the top of the bank of an intermittent stream. (T. 737-738; DEP Exs. 1, 2)

70. The vertical wellbores of Geyer Wells are not located within 500 feet of an existing water supply or within 1,000 feet from an existing water well, surface water intake, reservoir or other water supply extraction point used by a water purveyor. (T. 737-738; DEP Exs. 1, 2)

71. The Geyer Well Site is within 3,000 feet of a number of surface owners with water supplies. (T. 738; DEP Exs. 1, 2)

72. The 2012 Oil and Gas Act and regulations prescribe casing and cementing requirements in unconventional gas wells. (58 Pa. C.S.A. §3217(b); 25 Pa. Code §§ 78.81-78.87; T. 810-813)

73. The Department requires companies to have a casing and cementing plan and that it be available for review at the Department's request. (T. 775)

74. Rex developed a casing and cementing plan for the Geyer Wells and it was on location. (T. 479; T. 880)

75. One purpose of casing and cementing a well is to protect the environment and groundwater by isolating the wellbore from the environment. (S. T. 85; T. 815)

76. Rex cemented the entire wellbore in the two unconventional wells it drilled at the Geyer Well Site. (S. T. 480-481; T. 111)

77. Rex used a cementing method and a type of cement that enhanced the cementing job completed on the 3H and 5H wells. (S. T. 480-481; T. 1284-1285)

78. The well records for the 3H and 5H wells were submitted to the Department and provided information on the casing and cementing that took place on those wells. (T. 820-825; DEP Exs. DEP 20-21)

79. The risk of gas migration around the casing seat is less likely when a wellbore is fully cemented like the 3H and 5H wells. (T. 111)

80. Butler County had previous oil well development in the Mars Oil Field in the general vicinity of the Geyer Well Site. (S. T. 70, 330)

81. The Mars Oil Field wells targeted an oil sand at a depth of 1,900 to 2,000 feet. (S. T. 70, 330, 347, 475)

82. Mr. Daniel Fisher was admitted as an expert during the Supersedeas Hearing in the areas of geology, hydrogeology and contaminant transport monitoring. He also testified during the December 2016 Hearing. (S. T. 31; T. 60-187)

83. Dr. Terry Engelder was admitted as an expert during the Supersedeas Hearing in the area of geosciences. (S. T. 315)

84. Mr. Bryce McKee was admitted as an expert during the December 2016 Hearing as an expert in the fields of geology, shale gas development, hydraulic fracturing and well integrity. (T. 1203)

85. Mr. Fisher relied primarily on historical maps and aerial photos to attempt to identify abandoned wells in the vicinity of the Geyer Well Site and the Geyer Wells. (S.T. 71-73; S. DRN Exs. 6 -10)

86. Mr. Fisher did not attempt to go out and field locate any of the abandoned wells he concluded were present in the vicinity of the Geyer Well Site. (S. T. 162)

87. Moody and Associates investigated whether there were any abandoned wells in the vicinity of the Geyer Well Site on behalf of Rex in 2014 and authored the Abandoned Well Report. (S. T. 470; DEP Ex. 10)

88. Mr. Smith reviewed the Abandoned Well Report and it did not raise any concerns for Rex. (S. T. 478-479)

89. Rex did not uncover anything during the excavation of the access road and well pad at the Geyer Well Site that indicated the presence of historic wells in those locations. (S. T. 478)

90. The Department communicated with Rex about the Abandoned Well Report and abandoned wells during its review for the Renewal Permits. (T. 743-749; DEP Exs. 15, 16)

91. The Geyer Well Site is located in close proximity to a geologic feature that Mr. Fisher labeled the Blairsville-Broadtop cross-strike structural discontinuity (“Blairsville CSD”). (T. 61)

92. A CSD is a large-scale, vertically-fractured zone that extend upwards from the geologic basement. (T. 87-88)

93. Surface geologic features, identified as fracture traces or lineaments, exist in the vicinity of the Geyer Well Site. (S. T. 56–58; 191; S. DRN Ex. Fig. 4-6; T. 117-118)

94. The identification and mapping of fracture traces, is in part an art that requires judgment on the part of the mapper, because one person’s perception of a line can be different than another person. (S. T. 191-193)

95. In general, the maximum height that rock fracturing appears to occur above hydraulic fracturing is 1,600 to 1,800 feet. (T. 207-208)

96. The depth to the Marcellus formation in the area of the Geyer Well Site is approximately 6,000 feet. (T. 1231)

97. The Upper Hamilton Group, including the Tully Limestone, sits above the Marcellus shale and acts as a vertical barrier to the fractures created by hydraulically fracturing the Marcellus shale. (T. 1237-1240)

98. Even if fracturing occurs above the Tully Limestone as a result of hydraulic fracturing of the Marcellus shale, the fractures would still be approximately 2,000 feet below the depth of the abandoned wells in the vicinity of the Geyer Well Site. (T. 1302-1303)

99. The Blairsville CSD acts as a seal to the migration of gas and fluid into the groundwater rather than a conduit. (T. 1260)

100. Mr. Fisher had no evidence that Ms. Groman's water well was impacted by Rex's drilling of the 3H and 5H wells at the Geyer Well Site. (T. 104)

101. Mr. Fisher was not aware of any gas migration or release of gas as a result of connection to abandoned wells following the drilling and completion of the 3H and 5H wells. (T. 102-103)

102. There are approximately 80 unconventional wells drilled within a 2.5 mile distance from the Blairsville CSD. (S. T. 518; S. DEP Ex. 1)

103. There are approximately 520 unconventional wells drilled within a 2.5 mile distance from one of the six CSDs in Pennsylvania. (S. T. 520)

104. Rex has drilled over 130 unconventional wells in Butler County and has three other well sites in Middlesex Township other than the Geyer Well Site. (S. T. 456)

**Noise Issues**

105. Actual site operations at the Geyer Well Site took place in stages with the first phase consisting of the construction phase, which involved general construction activity and general construction equipment such as dump trucks, bulldozers and backhoes. (T. 889-890)

106. On December 7, 2015, Rex began drilling the vertical portion of the 3H and 5H wells. (S T. 489)

107. In December 2015, Ms. Mary Ann Wagner, Ms. Jennifer Chomicki and Ms. Victoria Zaccari (collectively identified as the “Weatherburn Neighbors”) resided in the Weatherburn Subdivision located east of the Geyer Well Site. (S. DRN Ex. 12)

108. The Weatherburn Neighbors noticed an increase in noise from the Geyer Well Site associated with the commencement of the vertical drilling of the 3H and 5H wells in December 2015. (S. T. 222, 233-234, 266)

109. The Weatherburn Neighbors’ sleep was disrupted by the increased noise from the Geyer Well Site in December 2015. (T. 223-224, 234, 267)

110. Mr. Daniel Gengler and Mrs. Deisha Gengler resided at 344 Denny Road, Valencia, Pa for approximately 14 years, including in December 2015. (S. R-11 at 5)

111. The Genglers can see the Geyer Well Site and the Weatherburn Subdivision from their home. (S. R-10 at 8-9; R-11 at 8)

112. The Genglers home is 200 to 300 yards from the Geyer Well Site and at approximately the same elevation as the homes in the Weatherburn Subdivision. (S. R-10 24-25; R-11 at 23-24)

113. Mrs. Gengler did not hear any noise from the Geyer Well Site prior to the December 2015 drilling activity. (S. R-10 at 13).

114. The noise from the December 2015 drilling activity did not have an impact on the Genglers sleep or other activities. (S. R-10 at 17-19; R-11 at 17-18)

115. The increase in noise in December 2015 associated with the vertical drilling at the Geyer Well Site lasted several days but less than two weeks. (T. 223, 235)

116. Rex attempted to mitigate the noise from the Geyer Well Site prior to and during the December 2015 drilling activity by the installation of 16-foot outer sound wall, a secondary interior sound wall and other operational restrictions. (S. T. 464-465, 486-489)

117. Mr. Gage Miller was admitted as an expert in environmental sound at the Supersedeas Hearing. (S. T. 451)

118. Following the December 2015 drilling activity, Rex raised the height of the outer sound wall to 32 feet on the sides of the well pad towards Weatherburn Subdivision and Denny Road. (T. 830, 904-906)

119. Rex took additional measures beyond raising the sound wall to address noise concerns prior to the next phase of drilling in April 2016, including drilling the wells on mud rather than air which lessened the noise from generators, setting an interior sound wall around a compressor and hanging curtains around the upper man-walk areas. (T. 906)

120. In mid-April, 2016, Rex drilled the horizontal portion of the 3H and 5H wells. (T. 897-898, DEP Ex. 20, 21)

121. On April 26, 2016, Rex submitted a Notice of Intent to plug the 4H well and on May 4, 2016, Rex plugged the 4H well. (DEP Ex. 18)

122. Mr. Lobins was not aware of the Department receiving any noise complaints associated with the April-May 2016 drilling and plugging activities at the Geyer Well Site. (T. 831)

123. Rex received noise complaints arising from its activities at the Geyer Well Site in April 2016. (T. 936)

124. Rex conducted hydraulic fracturing of the 3H well and the 5H well at the Geyer Well Site in July 2016. (DEP Exs. 22 23)

125. Rex used a method known as “zipper fracturing” during the hydraulic fracturing of the 3H well and the 5H well at the Geyer Well Site to shorten the length of the hydraulic fracturing process. (T. 920)

126. Mr. Jeffery Swackhammer, Jr. resided in the Weatherburn Subdivision in 2016. (T. 24, 26)

127. Mr. Swackhammer experienced loud and disruptive noise associated with the Geyer Well Site for a week in July 2016. (T. 26)

128. Mr. Swackhammer contacted the Department and his Township about his noise concerns. (T. 30-31, DRN Ex. A-3)

129. After July 2016, Mr. Swackhammer was not bothered by the noise associated with Rex’s activities at the Geyer Well Site from September 2016 through the hearing date in December 2016. Mr. Swackhammer could not recall if the noise from the Geyer Well Site bothered him in August 2016. (T. 36)

130. Mr. Frank Thomas resided in the Weatherburn Subdivision starting in 2014. (T. 532)

131. Mr. Thomas first experienced noise from the Geyer Well Site in December 2015 and he complained about the noise to the Township at that time. (T. 536-537)

132. Mr. Thomas found that the noise associated with the horizontal drilling in April 2016 was quieter and tolerable and he did not call the Township in April with any noise complaints. (T. 539)

133. The noise in July 2016 was lower during the evening and overnight but started up again early in the morning (T. 541)

134. Mr. Thomas complained about the noise in July 2016 to the Department and his Township. (T. 544; DRN Ex. A-4)

135. Mr. Thomas could not remember the number of days that he noticed the noise taking place in July 2016. (T. 547)

136. Mr. Douglas Welsh works for the Department as an Oil and Gas Supervisor. (T. 39)

137. Mr. Welsh was aware that the Department received noise complaints during the December 2015 drilling phase. (T. 41, 45-46; DRN Ex. A-128)

138. The Department received 14 noise complaints related to the Geyer Well Site from July 14, 2016 to July 18, 2016 (T. 41; DRN Ex. A-5)

139. Mr. Welsh inspected the Geyer Well Site multiple times during the hydraulic fracturing phase in July 2016. (T. 55)

140. On July 15, 2016, Mr. Welsh recorded noise levels ranging from 30 to 68 units on his phone using an app named Sound Meter HD at four unidentified locations in the vicinity of the Geyer Well Site. (T. 47; DRN Ex. A-5)

141. The phone app used by Mr. Welsh stated that it is not a professional device for measuring decibels and his phone was not calibrated as a sound measurement device. (T. 48; DRN Ex. A-5)

142. Mr. Welsh found that there was a noticeable level of noise associated with the Geyer Well Site at each of the locations he stopped on July 15, 2016, but he found that there was no violation. (T. 48)

143. The Department did not issue a Notice of Violation for the noise from the Geyer Well Site. (T. 59)

144. The Department discussed the noise issues with Rex and Rex cooperated with the Department in trying to respond to the noise issues. (T. 56)

145. During hydraulic fracturing from July 11, 2016 through July 18, 2016, Rex limited the hours of work at the Geyer Well Site in order to comply with the special condition of the Geyer Wells Permits and Renewal Permits. (T. 888)

### **Air Issues**

146. Air pollution from unconventional natural gas extraction is regulated by the Department's Bureau of Air Quality mostly through Air Quality Permit Exemption Category 38 ("Exemption 38"). (Parties Joint Stipulation Regarding Facts and Exhibits ("Jt. Stip.") No. 66)

147. Exemption 38 conditionally exempts unconventional natural gas operations at well sites from the air pollution plan approval or air pollution operating permit requirements. (Jt. Stip. 67)

148. Exemption 38 contains an exemption threshold for certain types of activities and emissions, including: 1) volatile organic compounds (2.7 tons per year "tpy"); 2) hazardous air pollutants ("HAP") (0.5 tpy for a single HAP and 1.0 tpy for a combination of HAPs) and 3)

nitrogen oxides from stationary internal combustion engines (100 pounds per hour, 0.5 tons per day, 2.75 tons per ozone season, and 6.6 tpy). (Jt. Stips. 72, 77, and 80; T. 637-638)

149. Exemption 38 also incorporates federal regulations that apply to certain equipment and includes requirements for leak detection and monitoring as well as reporting requirements. (T. 631-632)

150. The bases for the Department's belief that emissions from unconventional gas well sites are low enough so as to not pose a health risk are the Department's Short Term Air Study, the operator-reported emissions data from the Department's Marcellus air inventory and emission factors. (Jt. Stip. 86)

151. Rex did not have an open impoundment for flowback on the Geyer Well Site. Flowback was put in tanks and removed from the Geyer Well Site. (T. 907)

152. The only impoundment on the Geyer Well Site was a freshwater impoundment that contained purchased drinking water from the local water authority. Rex did not use any additives in the freshwater impoundment at the Geyer Well Site. (T. 900-901)

153. The freshwater impoundment is not a source for VOCs. (T. 401)

154. Rex had equipment on the Geyer Well Site to manage air emissions on the Geyer Well Site including a condensate tank and an EPA-certified combustor to burn emissions from certain tanks. (T. 912-913)

155. Condensate is a source of air emissions but ultimately there was no condensate production from the 3H and 5H wells at the Geyer Well Site because they were primarily dry gas wells. (T. 910-911)

156. Rex used electric-based pneumatic controllers instead of gas-based pneumatic controllers which eliminated the gas-based pneumatic controllers as a source of fugitive air emissions. (T. 913-914)

157. Rex utilized “green completion” measures to reduce air emissions from the completion of the 3H and 5H wells in accordance with the special condition in the Geyer Wells Permit. (Tr. 87, 902, 903, 913-916)

158. Ms. Julie Panko was admitted as an expert in environmental and human health risk assessments and exposure to ambient air pollutants including those related to oil and gas development and production in the December 2016 Hearing (T. 965-966, 972-973)

159. Dr. Ranajit Sahu was admitted as an expert in the December 2016 Hearing in the field of air pollution, including air pollution calculations, controls and compliance and risk assessment and measurement. (T. 561)

160. Dr. Jerome Paulson was admitted as an expert in the December 2016 Hearing in the fields of pediatrics, environmental health and children’s environmental health. (T. 290)

161. Dr. Paulson testified regarding specific epidemiological and environmental health studies that he had reviewed. (T. 347-348, 350-354, 355-356, 358, 361-363, 365-368, 370-376, 382-385, 406-409, 412-419, 424-429, 432-435, 437-438, 461-464, 468-473, 484-488, 506, 510-511, 515-522, 527-528; DRN Ex. A-132, Table 2)

162. Epidemiological studies look at a group or groups of people and different co-variables to try to determine what is associated with a particular outcome. (T. 313-314)

163. Finding an association between two things in an epidemiologic study does not show that the one thing caused the other thing. (T. 437)

164. Community-based participatory research organizes community participants to contribute information in a structured way that controls for variables and allows for analysis of the collected information by professionals. (T. 364)

165. Epidemiological studies and community-based participatory research projects have been conducted to look at the potential environmental health impacts of natural gas activities. (T. 375-376; DRN Ex. A-132, Table 2)

166. The epidemiological studies and community-based participatory research generally rely on distance from the natural gas activities as a proxy for exposure to the emissions from the natural gas activity. (T. 370-371, DRN Ex. A-132, Table 2)

167. The distance/proximity to the natural gas activities in the studies varied and that distance/proximity variance makes it harder to compare the various studies. (T. 370; DRN Ex. A-132, Table 2)

168. Proximity to an activity does not necessarily indicate specific exposure to a chemical and therefore proximity is not the best possible surrogate for exposure. (T. 409-410, 995)

169. The type and scope of the natural gas activity taking place would have importance in understanding studies evaluating the impacts on people in close proximity to those activities. (T. 502-504)

170. Many of the epidemiological studies reviewed by Dr. Paulson that were the basis of his testimony did not detail the type and scope of the natural gas activities that were taking place during the studies. (T. 502-508)

171. Ms. Panko testified regarding specific epidemiological and environmental health studies that she had reviewed. Some of the studies were the same as those addressed by Dr.

Paulson during his testimony. (T. 973-1010, 1154-1160, 1163-1167, 1170-1171; Rex Ex. P-46, Tables 1 and 2)

172. Among the published studies discussed by Ms. Panko was one identified as Maskrey et al. 2016 in which she was a participant. (T. 988-989, Rex Ex. P-46, Table 1)

173. The Maskrey et al 2016 studied involved data collected to evaluate the impact of unconventional gas activity, specifically the hydraulic fracturing, flaring and production phases, on VOC emissions at a school site. (T. 957-960, 988-989, Rex Ex. P-46, Table 1)

174. Rex hired Chem-Risk to characterize various air emissions at the Geyer Well Site during certain operational periods of time. (T. 920-921)

175. Chem-Risk conducted what it termed baseline or background air sampling in late August - September 2015 after construction of the access road and well pad at the Geyer Well Site was completed. (T. 1015, Rex Ex. P-23)

176. Chem-Risk conducted air sampling at the Geyer Well Site during the following wellpad activities and time periods: 1) Background – Light Pad Activity 6/24/2016 to 7/10/2016 and 7/19/2016 to 7/29/2016; 2) Completions – 7/11/2016 to 7/18/2016; 3) Flowback – 7/30/2016 to 8/8/ 2016 and 4) Production – 8/9/2016 to 9/19/2016. (T. 1027-1029; Rex Ex P-46, Summary of Wellpad Activity Periods Monitored)

177. Chem-Risk did not do any air sampling during the vertical or horizontal drilling phases at the Geyer Well Site. (T. 1108-1111)

178. Chem Risk had five sampling sites identified as Sites A through E where it placed the air monitoring equipment on the Geyer Well Site. (T. 1019, 1059; Rex Ex. P-46, Figure 1)

179. Sites C and D were located north and west of the drill pad in the vicinity of the high school. (T. 1020, Rex Ex. P-46, Figure 1)

180. Chem-Risk sampled for H<sub>2</sub>S, NO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, total VOCs and carbon monoxide using continuous monitoring. Individual VOCs were grab sampled using summa canisters for the specific VOCs. (T. 1030, 1041, 1085-1086, 1123-1125; Rex Ex. P-24)

181. Chem-Risk identified and monitored for the chemicals of concern that it determined were most likely associated with natural gas development but it did not monitor for all possible chemicals of concern. (T. 1068-1076)

182. Chem-Risk did not do any dispersion modeling or dispersion analysis of the air emissions at the Geyer Well Site. (T. 1065-1067)

183. Ms. Panko compared the air sampling data collected by Chem-Risk at the Geyer Well Site to various benchmarks she concluded were appropriate for evaluating the health impacts of the air emissions. (T. 1037-1054)

184. Ms. Panko could not reach a conclusion regarding the health risks associated with the NO<sub>2</sub> air samples at the Geyer Well Site because of limitations related to the sampling equipment. (T. 1079- 1082)

185. Ms. Panko also concluded that while the carbon monoxide concentrations at the Geyer Well Site were lower than the identified health-based standards, the comparison was inappropriate and made it challenging to determine the health risk from the carbon monoxide air emissions data. (T. 1078-1083)

## DISCUSSION

### Standard of Review

This matter involves a third party appeal by Delaware Riverkeeper of permits issued to Rex by the Department. In a third party permit appeal, in order to be successful, the party or parties challenging the Department's permit decision must show, by a preponderance of the evidence, that the Department acted unreasonably or in violation of the Commonwealth's laws or

the Pennsylvania Constitution in issuing the permit. *United Refining Company v. DEP*, 2016 EHB 442,448; *aff'd.*, *United Refining Company v. Dep't of Env'tl. Prot.*, 163 A.3d 1125 (Pa. Cmwlth. 2017). See also *Shuey v. DEP*, 2005 EHB 657, 691 (citing *Zlomsowitch v. DEP*, 2004 EHB 756, 780); *Brockway Borough Mun. Auth. v. Dep't of Env'tl. Prot.*, 131 A.3d 578, 587 (Pa. Cmwlth. 2016) (In order to prevail, appellants must show that the Department acted unreasonably or contrary to the laws of the Commonwealth or the Pennsylvania Constitution).

The preponderance of evidence standard requires that Delaware Riverkeeper meet its burden of proof by showing that the evidence in favor of its proposition is greater than that opposed to it. It must be sufficient to satisfy an unprejudiced mind as to the existence of the factual scenario sought to be established. Delaware Riverkeeper's evidence must be greater than the evidence that the issuance of the permit was appropriate or in accordance with the applicable law. *United Refining*, 2016 EHB at 449; *Perano v. DEP*, 2011 EHB 623, 633. The party challenging the permit issuance may not simply raise an issue and then speculate that all types of unforeseen calamities may occur. *United Refining*, 2016 EHB at 449 citing *Shuey v. DEP & Quality Aggregates, Inc.*, 2005 EHB 657, 711. The Board's review is de novo and we can admit and consider evidence that was not before the Department when it made its initial decision, including evidence developed since the filing of the appeal. *United Refining, supra.*; see also *Smedley v. DEP*, 2001 EHB 131; *Warren Sand & Gravel v. Dep't of Env'tl. Res.*, 341 A.2d 556 (Pa. Cmwlth. 1975).

### **Analysis**

The 2012 Oil and Gas Act at 58 Pa. C.S.A. § 3211(a) provides that no person shall drill a well without having first obtained a well permit under subsections (b), (c), (d) and (e). Under 58 Pa. C.S.A. § 3211 (e), the Department shall issue a permit within 45 days of submission of a

permit application unless the Department denies the permit application for one or more of the reasons set forth in subsection (e.1), and it further provides that the Department may impose permit terms and conditions necessary to assure compliance with the 2012 Oil and Gas Act or other laws administered by the Department. In its NOA and post-hearing briefs, Delaware Riverkeeper argues that the Department should have denied the applications for the Geyer Well Permits under 58 Pa. C.S.A. § 3211 (e.1)(1).<sup>2</sup> This section provides that the Department may deny a permit because the well site for which a permit is requested is in violation of any of this chapter or issuance of the permit would result in a violation of this chapter or other applicable law.

Delaware Riverkeeper set forth two general arguments for why it contends the Department should have denied Rex's applications for the Geyer Wells Permits or Renewal Permits pursuant to 58 Pa. C.S.A. § 3211 (e.1)(1). First, it contends that the Department's issuance of the Geyer Wells Permits and/or Renewal Permits was an abuse of discretion and a violation of specific statutes, associated regulations, and the prohibition against permitting a nuisance. (Appellants' Proposed Findings of Fact, Conclusions of Law, and Post-Hearing Brief, p. 120) ("DRN's Post-Hearing Brief"). Second, it argues that the Department's approvals violate Appellants' inherent rights under Article 1, Section 27 of the Pennsylvania Constitution.<sup>3</sup> *Id.*

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<sup>2</sup> Delaware Riverkeeper does not specifically assert that the Department should have denied the Geyer Well Permits or Renewal Permits under any of the other reasons listed in 58 Pa. C.S.A. § 3211 (e.1) and no evidence or testimony was presented at the hearing that would support a conclusion that the Department should have denied the Geyer Well Permits or Renewal Permits under any of the five other reasons identified in 58 Pa. C.S.A. § 3211 (e.1).

<sup>3</sup> DRK's Post-Hearing Brief as well as the initial post-hearing briefs of Rex and the Department extensively discuss Delaware Riverkeeper's claim that the issuance of the Well Permits violated Article 1, Section 27 using the three part test established in *Payne v. Kassab*, 312 A.2d 86 (Pa. Cmwlth 1973), aff'd 361 A.2d 263 (Pa. 1976). On the day that the last post-hearing brief in this matter was scheduled to be filed, the Pennsylvania Supreme Court issued its decision in *Pa. Env'tl. Def. Found. v. Commonwealth*, 161 A.3d 911 (Pa. 2017) that overruled the three part test in *Payne* and rendered much of the initial post-hearing briefing from the parties on that issue moot. The parties filed supplemental post-hearing briefs

The Department and Rex argue that the issuance of the Geyer Well Permits and the Renewal Permits was reasonable and that Delaware Riverkeeper has not demonstrated that the Department's actions violated any existing laws or regulations including Article 1, Section 27 of the Pennsylvania Constitution.

### **Statutory and Regulatory Issues**

Delaware Riverkeeper asserts that the Department should have denied Rex's applications for the Geyer Wells Permits and Renewal Permits because their issuance results in the violation of the Clean Streams Law, the 2012 Oil and Gas Act, the Administrative Code, associated regulations, and the prohibition against permitting a nuisance. Delaware Riverkeeper points out that the Department has the authority under 58 Pa.C.S. § 3211(e.1)(1) to deny a well permit if the issuance of the permit would result in a violation of the 2012 Oil and Gas Act or other applicable law. In analyzing this position, we start by focusing on the specific statutory and regulatory provisions that Delaware Riverkeeper claims were violated by the Department's permitting decision in this case. This is more difficult than it would first appear because many of Delaware Riverkeeper's claims of potential or actual statutory and regulatory violations are general in nature and do not identify a specific section or sections of the relevant statute or regulation that the permit issuance allegedly violated. After reviewing Delaware Riverkeeper's post-hearing briefs in detail, our understanding of the list of specific statutory and regulatory provisions violated by the issuance of the Geyer Wells Permits and Renewal Permits according to Delaware Riverkeeper are as follows: 1) The Clean Streams Law – 35 P.S. §§ 691.3, 691.307, 691.401, 691.402, 691.611 (DRN's Post-Hearing Brief, p. 116); 2) the 2012 Oil and Gas Act – 58 Pa.C.S.

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addressing the Article 1, Section 27 claims under the direction provided by the Pa Supreme Court in its *PEDF* decision.

§ 3259 (DRN's Post-Hearing Brief, p. 116) and 3) the Administrative Code – 71 P.S. §§ 510-17(1)-(3) 3259 (DRN's Post-Hearing Brief, p. 115-116).

Delaware Riverkeeper states that contamination of the waters of the Commonwealth, both surface water and groundwater, is a violation of the Clean Streams Law citing 35 P.S. §§ 691.307, 691.401, 691.402, 691.611. It also argues that water contamination is a public nuisance because it unreasonably interferes with a right common to the general public and cite 35 P.S. §§ 691.3, 691.401 along with other authorities in support of its position. In its Post-Hearing Brief, Delaware Riverkeeper fails to provide any detailed legal analysis of these statutory provisions or how it contends the issuance of the Geyer Wells Permits or Renewal Permits violated these statutory provisions. In its proposed Findings of Fact, Delaware Riverkeeper asserts that groundwater contamination at the Geyer Well Site can occur through the following agreed-upon mechanisms: wellbore casing failures, communication with nearby abandoned and orphaned wells and methane migration. (DRN's Post-Hearing Brief, FOF No. 472, p. 61). It listed no specific factual findings addressing surface water contamination or explaining the risk of surface water contamination at the Geyer Well Site. Delaware Riverkeeper's argument for denial of the Geyer Wells Permits and Renewal Permits appears to rest on its theory that the unique geologic conditions at the Geyer Well Site, in conjunction with the presence of abandoned wells in the area, created a sufficiently high risk of water contamination through the listed mechanisms that permitting the wells constituted a violation of the Clean Streams Law and its regulations. We disagree with Delaware Riverkeeper's conclusion and find that the issuance of the Geyer Wells Permits and Renewal Permits is not a violation of the Clean Streams Law and its regulations.

Delaware Riverkeeper argued in the Supersedeas Hearing and the December 2016 Hearing that there was a substantial risk of groundwater contamination if the Geyer Wells were

permitted by the Department. The testimony and evidence on this issue were presented by DRN's expert witness, Daniel S. Fisher. Mr. Fisher testified that the setting of the Geyer Well Site was geologically unique because of its location approximately 2.6 miles from the Blairsville-Broadtop Lineament that he described as a cross-strike structural discontinuity ("CSD"). Mr. Fisher theorized that the risks posed by placing the Geyer Wells in proximity of the CSD were enhanced by the presence of abandoned wells in the vicinity of the Geyer Well Site. The Board addressed Mr. Fisher's theory extensively in its Opinion in Support of Order Denying Petition For Supersedeas ("Supersedeas Opinion") and found "that, at most, the concerns raised by Mr. Fisher are speculative and do not amount to a greater level of risk than exists with any other unconventional gas drilling projects." *Delaware Riverkeeper v. DEP*, 2016 EHB 41, 52. In the December 2016 Hearing, Mr. Fisher's testimony on direct largely addressed the expert reports filed by Rex and the Department's experts. On cross-examination, he testified that he had not done anything further to prove his theory in the time since the Supersedeas Hearing and that he stood by the conclusion he offered in that hearing that drilling and producing the Geyer Wells created an extraordinary risk. In his testimony, he also acknowledged that there was no evidence that the drilling or completion of the Geyer Wells had caused groundwater contamination or resulted in any communication between those wells and the abandoned wells that he had identified and discussed in his Supersedeas Hearing testimony. In other words, he had no evidence that the extraordinary risk he raised in his testimony at the Supersedeas Hearing had taken place by the time of the December 2016 Hearing despite the drilling and completion of the 3H and 5H wells at the Geyer Well Site.

The Department and Rex presented testimony addressing Mr. Fisher's theory during the Supersedeas Hearing and the Department offered additional expert testimony on this topic during

the December 2016 Hearing. The Department's expert witness at the December 2016 Hearing, Bryce J. McKee, disputed the testimony offered by Mr. Fisher and stated that the Geyer Well Site is located in a geologically stable and structurally uncomplicated area. While he agreed in general with some of the potential means by which gas migration could occur, he disputed Mr. Fisher's theory that CSDs create a pathway for gas migration and instead testified that the data showed that CSDs are more likely to act as a seal against gas migration rather than a conduit that would permit gas movement. He specifically testified that the Blairsville-Broadtop Lineament that Mr. Fisher was concerned with would act as a seal and would not serve as conduit for gas or fluid migration into groundwater. Further, when Mr. McKee was questioned on cross-examination regarding the risk of stray gas contamination of freshwater aquifers through a suboptimal cement job of the well casing, he acknowledged that possibility but noted that Rex's cementing plan demonstrated that Rex used a state-of-the-art cement technique and material that was more protective than the typical well cement. Delaware Riverkeeper did not provide any evidence that the cement job at the Geyer Wells was inadequate or failed to prevent gas migration.

Following our review of the new testimony from the December 2016 Hearing, our opinion that the Department acted correctly in issuing the Geyer Well Permits and Renewal Permits, despite the concerns regarding potential groundwater contamination raised by Delaware Riverkeeper has not changed from the time of our Supersedeas Opinion. We find that Mr. Fisher's theory remains speculative at best and that the Department's decision to issue the Geyer Well Permits and Renewal Permits did not pose a sufficient risk of groundwater contamination to constitute a violation of the Clean Streams Law. If anything, the lack of any new information from Mr. Fisher to prove his theory, in combination with the new testimony offered by the

Department's expert, strengthens our determination that the Department's actions were not a violation of the statute or the regulations governing protection of the waters of the Commonwealth. In addition, as previously noted, Delaware Riverkeeper presented no testimony or evidence at the hearing that Rex's activities at the Geyer Well Site, which at the time of the hearing consisted of the drilling, completion and production from two unconventional gas wells, resulted in actual contamination of the groundwater (or surface water) in the vicinity of the Geyer Wells. While that alone is not sufficient to disprove the theory offered by Mr. Fisher, given that some of the potential risks to groundwater may take time to develop and/or manifest, it does suggest that the degree of risk which Mr. Fisher described at the time of the Supersedeas Hearing as a "perfect storm" was overstated. As the Board has said previously in the context of a third party challenge to a Department permitting decision, it is not enough to simply raise an issue and then speculate that all types of unforeseen calamities, such as groundwater contamination, may occur. See *United Refining Company v. DEP*, 2016 EHB 442, 449; *aff'd*, *United Refining Company v. Dep't. of Env'tl. Prot.*, 163 A.2d. 1125 (Pa. Cmwlth. Ct. 2017)

Delaware Riverkeeper next argues that the issuance of the Geyer Wells Permits and Renewal Permits violates Section 3259 of the 2012 Oil and Gas Act that makes it unlawful for any person to conduct an activity related to the drilling for or production of oil and gas in any manner as to create a public nuisance or adversely affect public health, safety, welfare or the environment. In raising this argument, Delaware Riverkeeper stated that the approval of the Geyer Wells Permits and Renewal Permits disregarded the protections needed for children and residents and created a nuisance, with a particular focus on alleged nuisances associated with water contamination, noise, and air emissions. As discussed above, Delaware Riverkeeper has failed to demonstrate that water contamination is an issue under the theory it relied on in this

case, and therefore, we find that the Department's decision to issue the Geyer Wells Permits and Renewal Permits was not a violation of the Oil and Gas Act because Rex's activities authorized under the Geyer Wells Permits and Renewal Permits did not create a nuisance or adversely affect public health, safety, welfare or the environment based on potential or actual water contamination.

The issue of noise and whether the noise from Rex's activities at the Geyer Well Site constituted a nuisance was raised in the Supersedeas Hearing. Witnesses testified that many of the commenters during the permit review process raised the issue of noise. As a result of those concerns, the Department placed a special condition in the Geyer Well Permits and Renewal Permits to address the noise issue that stated that:

The well operator shall implement necessary noise mitigation measures, including sound abatement walls during the drilling and completion of the well. If at any time the oil and gas operations covered under this permit create a public nuisance, the Department may require the well operator to adopt additional, appropriate remedial measures to abate such nuisance.

During the Supersedeas Hearing, the Board heard testimony regarding noise issues from neighbors of the Geyer Well Site, Derek Smith, a health, safety and environment director for Rex and Mr. Gage Miller, an environmental noise expert hired by Rex. The Board evaluated that testimony and applied the Restatement (Second) of Torts §821B. The Board determined that the noise at issue at the time of the Supersedeas Hearing did not constitute a public nuisance.

In the December 2016 Hearing, the Board heard about noise issues from two additional neighbors who had not testified during the Supersedeas Hearing. The Board also heard testimony from a Department Oil and Gas Supervisor, Doug Welsh, who investigated some of the noise complaints received by the Department, along with additional testimony from Derek Smith. The additional neighbors, Jeffrey Swackhammer and Frank Thomas, testified that while

there was some general intermittent noise associated with the Geyer Well Site, the noise was most disruptive during a limited period in July 2016. Mr. Swackhammer testified that the time period of the noise in July was around eight days. Mr. Thomas could not recall the exact length of time although he did testify that the noise was “turned off” in the evenings and at night. (T. 541). Both Mr. Swackhammer and Mr. Thomas testified that the noise was disruptive to their families and prompted them to contact their township and the Department with their concerns. Mr. Swackhammer testified that he was unsure whether he had experienced any noise issues in August 2016 but did not experience any noise issues associated with the Geyer Well Site from September 2016 through the time of the December 2016 Hearing.

Mr. Welsh’s testimony focused on the noise issue arising from activities at the Geyer Well Site in July 2016. Mr. Welsh noted that Rex doubled the height of the sound walls from 16 to 32 feet on two sides of the Geyer Well Site between the time of the Supersedeas Hearing and its July 2016 operations. According to Mr. Welsh, the Department received 14 written complaints regarding the Geyer Well Site from July 14 to July 18. Mr. Welsh visited the Geyer Well Site on July 15 to investigate the noise issue and found that there was a noticeable level of noise. He used a cell phone application to take noise readings but testified that he was not able to determine if the readings were accurate because he could not calibrate it and was not sure what units of noise the application was measuring. The Department did not issue Rex a notice of violation related to the noise at the Geyer Well Site in July 2016.

Derek Smith testified that Rex received noise complaints in April 2016 but was not asked about and did not testify about noise complaints from July 2016. Mr. Smith discussed several additional steps Rex undertook to address noise issues since the Supersedeas Hearing. In addition to raising the sound wall on two sides as mentioned by Mr. Welsh, Rex set an interior

sound wall around a compressor and hung curtains on the derrick floor. Rex also conducted drilling on mud as opposed to its usual practice of drilling on air because mud drilling allowed it to hold down noise from generators associated with air drilling. During the hydraulic fracturing process in July 2016, Rex used zipper fracking, a process that involves hydraulic fracturing both wells at the same time rather than in sequence, in an effort to shorten the duration of the hydraulic fracturing process. Rex also limited the hydraulic fracturing process to the daylight hours to reduce the impact of noise on the surrounding areas.

After reviewing all of the additional testimony concerning the noise issue offered by the parties in the December 2016 Hearing, along with further consideration of the earlier Supersedeas Hearing testimony, we remain convinced that the Department did not permit a public nuisance related to noise when it issued and renewed the Geyer Well Permits. In our Supersedeas Opinion, we stated that the Board applies the Restatement (Second) of Torts § 821B when determining whether an activity rises to the level of a public nuisance. Delaware Riverkeeper failed to convince us that the noise at the Geyer Well Site from the activities that had taken place up to that time was unreasonable and unnecessary under the circumstances, was a significant interference with public health, safety, peace, comfort or convenience, or that Rex's activities that were responsible for the noise were continuous in nature or would produce a permanent or long-lasting effect. The December 2016 Hearing testimony regarding the noise that occurred prior to the Supersedeas Hearing was very limited and was consistent with the earlier testimony and did not change our opinion about this issue. However, we need to consider whether any of the noise arising from Rex's activities following the Supersedeas Hearing constitute a nuisance.

The new noise testimony focused on two periods of activity at the Geyer Well Site, horizontal drilling in April 2016 and well completion including the hydraulic fracturing of the 3H and 5H wells in July 2016. Mr. Swackhammer, one of the two neighbors to offer additional testimony on noise issues, testified that he did not experience any significant noise issues in April 2016. The other neighbor, Mr. Thomas stated that the horizontal drilling in April 2016 was much quieter than the site activity in December 2015 and that he was actually very happy with the installation of the higher sound walls which he apparently credited with reducing noise at the Geyer Well Site. The testimony presented by Delaware Riverkeeper failed to support a finding that the noise from April 2016 significantly interfered with public health, safety, peace, comfort or convenience or that the noise produced a permanent or long-lasting effect.

The July 2016 noise associated with the completion of the 3H and 5H wells had a greater impact on the neighbors according to the testimony of both Mr. Swackhammer and Mr. Thomas. However, we hold that the noise did not rise to the level of a public nuisance in large part because the evidence was clear that the noise producing activity was not continuous in nature, and did not have a permanent or long-lasting effect. It lasted eight days and only took place during daylight hours. Mr. Swackhammer testified that he had no noise issues in September 2016 through the hearing date in December 2016 and was uncertain about any noise issues in August 2016. In both the Supersedeas Hearing and the December 2016 Hearing, the evidence demonstrated that while the noise certainly was a legitimate concern, it ultimately was of limited duration and, therefore did not cause a permanent or long-lasting effect or significantly interfere with public health, safety, peace, comfort or convenience. In addition, Rex took several steps above and beyond what was required to try and mitigate noise from the Geyer Well Site. Given those efforts, Delaware Riverkeeper did not demonstrate that the remaining noise from the Geyer

Well Site was unnecessary and unreasonable. The noise resulting from Rex's activities at the Geyer Well Site did not constitute a public nuisance and the Department did not violate Section 3259 of the 2012 Oil and Gas Act when it issued the Geyer Wells Permits and Renewal Permits.

Delaware Riverkeeper argues that Rex's drilling and production activities violate Section 3259 of the 2012 Oil and Gas Act because they generate air emissions that adversely affect public health, safety, welfare and/or the environment. They presented two experts, Dr. Ranajit Sahu and Dr. Jerome Paulson, to testify on the issue of air emissions and the potential for an adverse impact on the public and the environment from those emissions. Both experts were well qualified in their fields of expertise and offered credible testimony to the Board. Dr. Sahu's testimony centered on the need for a risk assessment to determine whether the air emissions from the Geyer Well Site adversely affect public health, safety, welfare or the environment and his concern that an adequate risk assessment of potential air emission impacts was not completed prior to the Department's permitting decision. His stated conclusion was that there was insufficient data available on the particular air emissions associated with the Geyer Well Site to conduct a proper risk assessment and that lack of data lead him to state "I have no knowledge that the Geyer site poses a risk. I don't know." (T. 710). Given that statement, Dr. Sahu's testimony does not support a determination that the Department violated Section 3259 of the 2012 Oil and Gas Act when it issued the Geyer Wells Permits or Renewal Permits.

Dr. Paulson's testimony addressed potential health impacts related to unconventional natural gas extraction. Dr. Paulson testified about the various chemicals used in the natural gas extraction process in general and the types of health impacts that can result from exposure to those chemicals. He also discussed the specific findings of various epidemiological and environmental health studies detailed in papers that he had reviewed on the subject. The studies

generally looked at the health status of various groups of people along with the proximity of the people in the study group to unconventional natural gas extraction activities. He summarized his testimony regarding the various studies by stating that “there are papers that show an association between unconventional gas activities and adverse health outcomes.” (T. 436). He further offered his opinion that the siting of the Geyer Wells as permitted by the Department would present a significant risk of adverse health impacts to the people, including children, who live and go to school nearby. (T. 378-79). He concluded that the Geyer Wells should not be allowed to go forward beyond where they already are because “we don’t know that the process can be done without creating injury to the population that lives there.” (T. 389).

Rex and the Department challenged Dr. Paulson’s conclusions and statements through cross-examination and direct testimony from Rex’s expert, Ms. Julie Panko. We found Ms. Panko to also be well qualified and credible in her testimony. Rex and the Department extensively questioned Dr. Paulson on the specifics of the epidemiologic studies he relied on for his opinion. Dr. Paulson acknowledged that there are no perfect studies and that these studies didn’t generally measure actual exposure to air emissions but instead relied on proximity as a surrogate for exposure. He also testified that an association between unconventional natural gas activities and negative health impacts does not show that one caused the other. Ms. Panko pointed out issues in a number of the epidemiologic studies relied on by Dr. Paulson including issues with the size of the data set and methodology and identified other studies that reached conclusions contrary to those cited by Dr. Paulson. She testified that the literature did not support the notion that there will be an increase in disease in the community near the Geyer Well Site based on her conclusion that the studies did not properly understand or account for exposure issues. Despite these concerns, Dr. Paulson asserted that his opinion did not rely on any one

study but was based on the weight of the evidence taking into account the range of findings from the available studies. Having heard the testimony regarding the studies reviewed by Dr. Paulson, as well as the criticisms of the studies, we find that the studies are inconclusive in proving an association between unconventional natural gas activities and public health issues as asserted by Delaware Riverkeeper. Further, the studies clearly do not prove causation between natural gas development activities and the alleged health impacts. Even Dr. Paulson acknowledged that this causation is not proven by the studies he testified about in this case.

Ultimately, however, our main issue with Dr. Paulson's testimony is that it reflected his general concerns with unconventional natural gas extraction but did not adequately address the particular situation at the Geyer Well Site. He testified that the proximity of the Geyer Wells to neighborhoods and schools in the area was the basis for his concern since he judged that proximity to be similar or even closer than what was present in some of the studies he reviewed. At the same time, he also acknowledged that proximity alone is not sufficient to determine other important information regarding potential health impacts such as the dose of the toxic substance that may be received, the length of exposure to that substance and what other substances may be coming from other sources. There was no testimony from Dr. Paulson that this other information was considered in forming his opinions regarding the Geyer Well Site. Nor did Dr. Paulson testify to any site specific emissions from the Geyer Wells. The list of potential chemicals in air emissions from unconventional natural gas extraction that Dr. Paulson testified about included emissions from compressor stations and processing plants, facilities that are not present at the Geyer Well Site.

Dr. Paulson acknowledged that the scope and types of natural gas activities that were taking place in the vicinity of a study would be relevant to understanding any public health issues

identified by the study. However, when he was asked about the scope and nature of various activities that were taking place in conjunction with the studies he relied on, he was not able to identify what specific activities took place and acknowledged that the studies in general did not provide detailed information about the activities. In one study where the nature of the activities was discussed, identified as the Macey study, he testified on cross examination that the nearest oil and gas infrastructure for the Pennsylvania samples that were included in the study was a compressor and a pig launcher not a well or wells. He was directly asked whether he had looked at the activity that actually happened on the Geyer Well Site and tried to compare those activities to the activities that took place in any of the studies on which he relied for his conclusion and he stated that he had not done so. (T. 511). He also acknowledged that if the wells at the Geyer Well Site were not flared, the methane was captured, there was no wastewater impoundment, no compressor station and no pigging operation, the connection he attempted to make between the studies he relied on and the situation at the Geyer Well Site would be “less likely.” (T. 511-12).

In contrast to Dr. Paulson’s more generalized testimony, Rex’s expert, Ms. Panko, offered testimony regarding site specific air emissions monitoring conducted at the Geyer Well Site by her company, ChemRisk, on behalf of Rex. The monitoring attempted to characterize background conditions at the Geyer Wells Site (August 27, 2015 to September 30, 2015) and to monitor air emissions during periods of activity on the Geyer Well Site including during completion of Geyer Wells 3H and 5H and subsequent production from those two wells (June 24, 2016 to September 19, 2016). However, no sampling was conducted before or during the construction of the well pad and access road at the Geyer Well Site or during the any of the drilling phases of the Geyer Wells. ChemRisk used both continuous monitoring equipment and grab sampling and monitored for H<sub>2</sub>S, NO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, carbon monoxide, and volatile

organic compounds (VOCs). Based on the air monitoring conducted by ChemRisk, Ms. Panko opined that the activities occurring at the well pad for the Geyer Wells were not affecting local air quality beyond the Geyer Well Site for the constituents monitored by ChemRisk. She offered a further opinion that the VOCs, with one exception not related to oil and gas activity, did not exceed the selected health benchmarks.

Delaware Riverkeeper strongly challenged these opinions on cross-examination and raised issues regarding the air emissions monitoring and the conclusions that Ms. Panko reached based on the data. Ms. Panko acknowledged that some operational periods during which Rex's activities at the Geyer Well Site would be likely to generate emissions were not monitored and, therefore, potential air emissions during those periods were not addressed by the ChemRisk study. She also agreed that ChemRisk did not do any dispersion modeling to fully understand how air emissions would travel within and beyond the Geyer Well Site. In addition, she acknowledged that there were chemicals that could potentially be emitted by Rex's activities at the Geyer Well Site, such as radon and sulfur oxides, that were not monitored at all during Rex's activities and, therefore, she could not offer an opinion regarding what health effects might result from the unmonitored chemicals. In light of this testimony, the Board recognizes that there are significant limitations to the ChemRisk study that was the basis of this portion of Ms. Panko's testimony. At the same time, and accepting the limitations, Ms. Panko's testimony is the only site specific information that was presented to the Board addressing the actual conditions and air emissions at the Geyer Well Site. Furthermore, the ChemRisk study did measure major chemicals of concern during operational activities that would account for a significant portion of the likely air emissions from the Geyer Well Site. The levels of the emissions that were monitored generally fell below the health based standards to which they were compared and Ms.

Panko offered reasonable explanations when there were exceedances of those standards. In general, limited as it was, the information presented by Ms. Panko suggests that it is more likely than not that the activities at the Geyer Well Site will not have a significant adverse impact on the air quality at and surrounding the Geyer Well Site. Looking at all the testimony from the experts on the potential and actual air emissions at the Geyer Well Site that may result from the Department's permitting decision, we find that Delaware Riverkeeper has not carried its burden to show that the Department violated Section 3259 of the 2012 Oil and Gas Act in issuing the Geyer Well Permits and Renewal Permits because Delaware Riverkeeper did not demonstrate by a preponderance of the evidence that the air emissions will adversely affect public health, safety, welfare or the environment.

Delaware Riverkeeper argues that the Department should have denied the Geyer Well Permits consistent with its obligations under the separate nuisance provisions in the Administrative Code found at 71 P.S. §§ 510-17(1)-(3). It cites to the Board's prior ruling in *Kwalwasser v. DER*, 1986 EHB 24, in support of this position. The cited provision from the Administrative Code provides that the Department:

shall have the power and its duty shall be:

- (1) To protect the people of this Commonwealth from unsanitary conditions and other nuisance, including any condition which is declared to be a nuisance by any law administered by the department;
- (2) To cause examination to be made of nuisances, or questions affecting the security of life and health, in any locality, and, for that purpose, without fee or hindrance, to enter, examine and survey all grounds, vehicles, apartments, buildings, and places, within the Commonwealth, and all persons, authorized by the department to enter, examine and survey such grounds, vehicles, apartment, buildings and places, shall have the powers and authority conferred by law upon constables;
- (3) To order such nuisances including those detrimental to the public health to be abated and removed.

71 P.S. §§ 510-17(1)-(3).

Delaware Riverkeeper points out that the language in the 2012 Oil and Gas Act goes further than this Administrative Code section in terms of what is prohibited. In addressing this provision, Delaware Riverkeeper does not set out any additional arguments beyond those previously discussed by the Board with regards to Section 3259 of the 2012 Oil and Gas Act. The Board rejected Delaware Riverkeeper's arguments that the Department's actions in granting the Geyer Wells Permits violated Section 3259 of the 2012 Oil and Gas Act. Since Delaware Riverkeeper's arguments concerning violation of the Administrative Code provision are the same as those already rejected by the Board when addressing nuisance issues under the 2012 Oil and Gas Act, and given that Delaware Riverkeeper concedes that the prohibitions in the 2012 Oil and Gas Act go further than the Administrative Code in addressing nuisances, we find that Delaware Riverkeeper has not persuaded us that the Department violated 71 P.S. §§ 510-17(1)-(3) in issuing the Geyer Wells Permits and Renewal Permits.

**Article 1, Section 27**

Delaware Riverkeeper's other main argument in this case is that the Department's decision to first issue and later renew the Geyer Wells Permits violated the Department's obligations under Article 1, Section 27 of the Pennsylvania Constitution. Article 1, Section 27 states as follows:

The people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic, and esthetic values of the environment. Pennsylvania's public natural resources are the common property of all the people, including generations yet to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all people.

**PA Const. Article 1, §27**

At the time of the hearing and during the initial filing of the parties post-hearing briefs, the arguments set forth by the parties focused on whether the Department had satisfied the

requirements of the three-part *Payne* test set forth in *Payne v. Kassab*, 312 A.2d 86 (Pa. Cmwlth. 1973), *aff'd.*, 361 A.2d 263 (Pa. 1976) (“*Payne*”). The Pennsylvania Supreme Court, in *Pa. Envntl. Def. Found. v. Commonwealth*, 161 A.3d 911 (Pa. 2017) (“*PEDF*”) overruled the *Payne* test. In place of the *Payne* test, the Supreme Court ruled that the proper standard of judicial review when reviewing a challenge to the constitutionality of Commonwealth actions under Section 27 “lies in the text of Article 1, Section 27 itself as well as the underlying principles of Pennsylvania trust law in effect at the time of its enactment.” *PEDF*, 161 A.3d at 930. The Board allowed the parties to file supplemental post-hearing briefs addressing the facts of this case and Delaware Riverkeeper’s claims under Article 1, Section 27 in light of the Pennsylvania Supreme Court’s decision in *PEDF*.

In recent decisions, the Board has addressed the nature of the Department’s duties and responsibilities under Article 1, Section 27 of the Pennsylvania Constitution in light of the opinion in *PEDF* and its decision to overrule the *Payne* test. In *Center for Coalfield Justice v. DEP*, 2017 EHB 799 (“*CCJ*”) and more recently in *Friends of Lackawanna v. DEP and Keystone Sanitary Landfill, Inc.*, 2017 EHB 1123 (“*FOL*”), the Board stated:

The Supreme Court, citing *Robinson Twpshp.*, held that Section 27 grants two separate rights to the people of Pennsylvania. 2017 Pa. LEXIS at \*38. The first right, which the Supreme Court describes as a prohibitory clause, places a limitation on the state’s power to act contrary to the right of citizens to clean air and pure water, and to the preservation of natural, scenic, historic and esthetic values of the environment. *Id.* The second right reserved under Section 27, according to the Supreme Court, is the common ownership by the people, including future generations, of Pennsylvania’s public natural resources. *Id.* The Supreme Court then notes that the third clause of Section 27 creates a public trust, with the natural resources as the corpus of the trust, the Commonwealth as the trustee and the people as the named beneficiaries. *Id.* at \*39.

The Supreme Court in *PEDF* next turns its attention to defining the Commonwealth’s responsibilities as trustee. After discussing private trust law

principles, it finds that the Commonwealth has two basic duties as trustee: 1) prohibit the degradation, diminution, and depletion of our public natural resources, whether the harms result from direct state action or the actions of private parties and 2) act affirmatively via legislative action to protect the environment. 2017 Pa. LEXIS at \*41-42. The Supreme Court further states that

Although a trustee is empowered to exercise discretion with respect to the proper treatment of the corpus of the trust, that discretion is limited by the purpose of the trust and the trustee's fiduciary duties, and does not equate 'to mere subjective judgment.' The trustee may use the assets of the trust 'only for purposes authorized by the trust or necessary for the preservation of the trust; other uses are beyond the scope of the discretion conferred, even where the trustee claims to be acting solely to advance other discrete interest of the beneficiaries.'

As previously discussed, the Supreme Court in *PEDF* states that the trust provision in Article I, Section 27 creates two basic duties for the Commonwealth, only one of which applies to the facts of this case. The Commonwealth has a duty to prohibit the degradation, diminution, and depletion of our public natural resources, whether the harms result from direct state action or the actions of private parties. In performing its trust duties, the Commonwealth is a fiduciary and must act towards the natural resources with prudence, loyalty and impartiality. According to the Supreme Court in *PEDF*, the duty of prudence requires the Commonwealth "to 'exercise such care and skill as a man of ordinary prudence would exercise in dealing with his own property.'" The duty of loyalty imposes an obligation to manage the corpus of the trust, i.e. the natural resources, so as to accomplish the trust's purpose for the benefit of the trust's beneficiaries. Finally, the duty of impartiality requires the trustee to manage the trust so as to give all of the beneficiaries due regard for their respective interests in light of the purposes of the trust. Putting all of this together, the issue for the Board to decide is whether the Department properly carried out its trustee duties of prudence, loyalty and impartiality to conserve and maintain the streams in the BMEEA by prohibiting their degradation, diminution and depletion

*CCJ*, 2017 EHB 855-56; 861-62.

As noted by the Board in *CCJ*, the *PEDF* case did not require the Supreme Court to discuss the application of the provisions of Article 1, Section 27 to a Department permitting decision. However, based on our review of the *PEDF* opinion and the plurality decision in

*Robinson Township v. Commonwealth*, 83 A.3d 901 (Pa. 2013) (“*Robinson Twshp*”) that was generally endorsed by the *PEDF* opinion, the Board in *CCJ* and *FOL* set forth its approach to reviewing Department decision making on permit applications under the *PEDF* Article 1, Section 27 regime. We first must determine whether the Department has considered the environmental effects of its action and whether the Department correctly determined that its action will not result in the unreasonable degradation, diminution, depletion or deterioration of the environment. Next, we must determine whether the Department has satisfied its trustee duties by acting with prudence, loyalty and impartiality with respect to the beneficiaries of the natural resources impacted by the Department decision. (See *CCJ*, 2017 EHB at 858-59, 862; *FOL*, 2017 EHB at 1163). There is clearly some overlap in this analysis since, for instance, it is reasonable to conclude that in order to satisfy its obligation to act in a prudent manner, a trustee with responsibility for environmental permitting, such as the Department, should consider the environmental effects of its permitting action before proceeding to grant a permit.

We first look at the issue of whether the Department has considered the environmental effects of its decision to grant the Geyer Wells Permits and correctly determined that issuing these permits will not lead to unreasonable degradation, diminution, depletion or deterioration of the environment. In *CCJ*, we pointed out that the permit application process required the applicant to provide detailed information on the environmental effects of the proposed activity and noted the lengthy and extensive review of that information by the Department. Delaware Riverkeeper argues that the process in this case fell well short of the Department process in *CCJ* that the Board found met the constitutional standard. Our discussion in *CCJ* was not intended to suggest that there was some minimum requirement under Article 1, Section 27 governing the amount of review time that must be undertaken by the Department and the amount of

information that must be considered by the Department. The Department’s consideration of the environmental effect of its permitting actions is, we believe, intended to be a flexible standard based on the nature of the activity and the potential impact of the activity on the environmental interests protected under Article 1, Section 27. We think this type of approach is consistent with the statement of the Supreme Court plurality in *Robinson Twshp* that the first right set forth in Article 1, Section 27 requires “each branch of the government to consider in advance of proceeding the environmental effect of any proposed action on the constitutionally protected features.” *Id.* at 952.

With that general guidance in mind, we turn to the points raised by Delaware Riverkeeper. They argue that “the Department failed to conduct a proper Section 27 pre-action analysis” in this case and therefore, failed to satisfy its constitutional obligation to consider the environmental effects prior to reaching its permitting decision. (Appellants’ Supplemental Post-Hearing Reply Brief Regarding Article I, Section 27 Of The Pennsylvania Constitution, p. 24). In order to conduct a proper pre-action analysis, the Department, in Delaware Riverkeeper’s opinion, is required to conduct a detailed risk assessment. Delaware Riverkeeper argues that instead of the required analysis, the Department relied on what Delaware Riverkeeper terms “the rote application of minimal regulatory requirements.” (DRN’s Post-Hearing Brief, p. 104). Further, Delaware Riverkeeper argues that any Department effort to determine the environmental effects of the Geyer Wells Permits was insufficient because it lacked adequate information about Rex’s planned operations and the local conditions at the Geyer Wells Site to determine the nature and extent of the environmental effects that would result from the issuance of the Geyer Wells Permits and Renewal Permits. Rex and the Department of course argue that the Department considered the environmental effects of its actions and correctly determined that the permitted

activities would not unreasonably degrade, diminish, deplete or deteriorate the environment at the Geyer Well Site. In support of their position, they emphasize the requirements in the laws and regulations governing the development of the Geyer Well Site and incorporated into the Geyer Wells Permits and Renewal Permits, as well as the additional steps taken by the Department and Rex to address various environmental issues and concerns raised by interested parties.

We start by observing that the 2012 Oil and Gas Act required Rex to submit a permit application containing information about the proposed activity for review by the Department. In the permit application, Rex provided information about the surface locations, proposed drilling depths, bottom hole locations, and proximity of the proposed Geyer Wells to features in the environment such as water bodies, wetlands, landfills, buildings, floodplains and designated public resources (publicly owned parks, game land, wildlife areas, National/State scenic rivers, historical and archaeological sites, etc.). (See DEP Ex. 1). Rex also identified whether the Geyer Wells would be in a special protection high quality or exceptional value watershed and whether the Geyer Wells would be located in a hydrogen sulfide (H<sub>2</sub>S) area. Rex stated that none of the environmental concerns identified on the permit application would be impacted by its proposed drilling activity. The applications for the Geyer Wells Permits also required Rex to identify any water supply wells within 3,000 feet of the Geyer Wells Site. All of this information is provided to assist the Department staff in identifying environmental issues that may be associated with the proposed activity. The Department permit reviewers in this case, specifically, Ms. Price, Mr. Babb, and Mr. Lobins testified that they reviewed and considered the information provided by Rex in reaching their permit decision.

The Department staff also stated that in addition to the information in the permit applications, they consider the impact of the existing statutory and regulatory requirements on the proposed activity and the fact that these requirements are designed to minimize and/or eliminate certain environmental effects related to the proposed activity. Rex is required to meet these statutory and regulatory requirements and the Department, in its review process, assumes that Rex will meet these requirements unless there is contrary evidence. The 2012 Oil and Gas Act and the corresponding regulations contain detailed and prescriptive standards for well drilling, well operations, well plugging and other activities associated with well development. These performance standards, such as the casing and cementing requirements, erosion and sedimentation control requirements, and control and disposal planning, to mention just some of the standards, are designed and intended to protect the environment. There was no evidence in this case that Rex failed to comply with any specific statutory or regulatory performance standards or that it was improper for the Department to consider compliance with those standards as part of its consideration of the potential environmental effects of the Geyer Wells.

The Department also received and considered numerous public comments about environmental issues during the permit decision process. According to the testimony and exhibits at the hearing, the Department reviewed and considered various environmental issues raised by the public including the public's concern regarding the proximity of the Geyer Well Site to people located in nearby schools and residential neighborhoods. Among the issues raised were fire and explosion risks and potential health issues associated with emissions from unconventional gas wells. As part of this process, the Department held a 3251 conference involving concerned citizens and Rex during which many of these same concerns were

discussed.<sup>4</sup> Department staff reviewed emergency planning documents from Rex because of the fire and explosion concern that was raised by the public. Department staff also discussed and considered the public health information presented by some of the public commenters. During the Department's review of Rex's permit renewal request, the Department asked for and received a study completed by a consultant for Rex addressing public concern regarding the presence of abandoned wells in the vicinity of the Geyer Well Site. The purpose of this review was to consider the issue raised by the public that abandoned wells might provide a conduit for gas migration or drilling fluids to escape into the groundwater.

The evidence and testimony at the hearing clearly demonstrate that the Department considered the environmental effects in advance of its permit decision. Unlike other governmental entities who may not have the environment as a focus, the Department's mission makes consideration of environmental effects central to its responsibilities and it would be a surprise to us if Department staff failed to do so when they make a permit decision. The evidence presented by Delaware Riverkeeper does not convince us that the Department failed to consider the potential for environmental effects in advance of issuing the Geyer Wells Permits and Renewal Permits in this case. The fact that the consideration did not involve a full blown risk assessment and was not as extensive as Delaware Riverkeeper believes was necessary does not, in our opinion, violate the requirements of Article 1, Section 27. We think that viewing the totality of what was considered, in conjunction with the existing laws and regulations that applied to the activity, as well as the nature and scope of the likely impacts, the review by the

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<sup>4</sup> Section 3251(a) of the 2012 Oil and Gas Act provides that a person with a direct interest in a matter subject to the 2012 Oil and Gas Act may request a conference to discuss and attempt to resolve a matter arising under the 2012 Oil and Gas Act. Representatives of the Mars Parents Group, a citizen's group that had provided public comments on the permit applications for the Geyer Wells, requested and participated in the conference.

Department was sufficient to satisfy the constitutional requirement that the Department consider in advance the environmental effects of its action.

After determining that the Department gave adequate consideration to the environmental effects, we are still required to judge whether Delaware Riverkeeper demonstrated that the Department's decision to issue the Geyer Wells Permits and Renewal Permits resulted in the unreasonable degradation, diminution, depletion or deterioration of the environment in violation of the first part of Article 1, Section 27. Delaware Riverkeeper argues that developments at the Geyer Wells Site will result in impacts such as water contamination, fire and explosion risks and air emissions that will violate Article 1, Section 27. The evidence set forth by Delaware Riverkeeper on this issue is generally the same evidence we considered in determining whether the decision to grant the Geyer Wells Permits and Renewal Permits violated relevant statutes and regulations. However, we are required to view that evidence in a different light to determine whether the constitutional standard is satisfied or not. Delaware Riverkeeper has not convinced us that the Department's decision to approve the Geyer Wells Permits and Renewal Permits was likely to cause or did in fact cause unreasonable environmental impacts and/or was contrary to the right of citizens to clean air and pure water, and to the preservation of natural, scenic, historic or esthetic values of the environment.

As previously discussed, Delaware Riverkeeper's water contamination theory centered on the presence of the Blairsville CSD that its expert, Mr. Fisher, contends posed a risk for gas migration and groundwater contamination. As we said at the time of the Supersedeas Hearing, we found Mr. Fisher's theory regarding the risk of contamination resulting from the drilling of the Geyer Wells in the vicinity of the CSD to be speculative and nothing about the additional testimony at the later hearing changed our opinion on this point. If anything, the additional

expert testimony from the Department's expert, Mr. McKee and the lack of any evidence of actual groundwater contamination or gas migration supports our determination that the risk was speculative at best. Furthermore, the Department staff can reasonably rely on the requirements found in the 2012 Oil and Gas Act such as the casing, cementing and plugging requirements that are designed to prevent the specific risk raised by Delaware Riverkeeper. We also note that before the Department granted the Renewal Permits, the Department review staff required Rex to provide information on abandoned wells in the vicinity of the Geyer Well Site that showed that any abandoned wells were not likely to create issues. Given the speculative nature of the risk to the groundwater in the area of the Geyer Wells, in conjunction with the provisions in the statute and regulations designed to minimize that risk, along with the steps that Rex took above and beyond those requirements and the lack of any evidence of actual contamination of the groundwater or surface water as a result of the activity at the Geyer Well Site, we find that Delaware Riverkeeper failed to prove that Department's decision to issue the Geyer Well Permits and the Renewal Permits resulted in the unreasonable degradation, diminution, depletion or deterioration of the water resources in the area of the Geyer Well Site or otherwise violated the rights of citizens under Article 1, Section 27.

We view the Delaware Riverkeeper's arguments concerning the potential fire and explosion risk to people near the Geyer Well Site similar to the concern regarding groundwater contamination. The risks are speculative and there was no evidence that any substantial fires or explosions occurred during Rex's activities at the Geyer Well Site. As we have discussed, the Department permit review staff did consider the risk of fire and explosion as part of its review process. The regulations required Rex to prepare an emergency response plan. According to testimony from Mr. Babb, while companies like Rex are required to generate emergency

response plans, these types of plans are not routinely submitted as part of the permit application. In this case, however, Rex did transmit its Preparedness, Prevention and Contingence Plan and Emergency Response and Emergency Action Plans to the Department (See Rex Ex. P-22) and Mr. Babb and Mr. Lobins gave them a limited review. Their review involved assuring that the emergency response plans were in place and contained all of the required elements but did not include a detailed analysis of those elements. Other than noting the proximity of the Geyer Wells Site to the local schools and the neighboring properties, there was no evidence that the Geyer Wells posed a greater than normal risk for a fire or an explosion. Delaware Riverkeeper did not offer any expert testimony that the distances to the schools and neighboring properties posed a level of unreasonable fire or explosion risk that should have received a more detailed evaluation from the Department staff. The evidence that was offered involved questioning the Department staff about their familiarity with other unconventional gas well sites that had experienced either fire or explosions. The fact that a limited number of other sites had experienced fires or explosions is not a sufficient basis to find substantial risk at the Geyer Wells Site. Absent anything further, we find that Delaware Riverkeeper failed to demonstrate that the Department's decision granting the Geyer Well Permits and the Renewal Permits caused the unreasonable degradation, diminution, depletion or deterioration of the environment and violated the people's right to clean air, pure water and to the preservation of the natural, scenic, historic or esthetic values of the environment.

Delaware Riverkeeper argues that air emissions that will result from the Geyer Wells Site violate the first provision of Article 1, Section 27. We disagree. We extensively discussed air emissions and the evidence of the potential health impacts alleged by Delaware Riverkeeper when analyzing whether the Department permit decision violated Section 3259 of the 2012 Oil

and Gas Act and concluded that Delaware Riverkeeper did not show that the air emissions will adversely affect public health, safety, welfare or the environment. That discussion and our conclusion remain relevant here. However, there are additional points that are worth discussing at this time. The first involves the permitting of air emissions from unconventional gas wells in general and the Geyer Wells in particular. The permit applications for the Geyer Wells did not contain any information on the level or type of anticipated air emissions from Rex's proposed activities at the Geyer Wells Site. The Department permitting staff acknowledged during its hearing testimony that they did not evaluate air emissions data as part of its permit review. Air emissions issues and potential health impacts were given some attention by Department staff during the permit review process as a result of various public comments presented to the Department but Mr. Babb stated that he only briefly reviewed the public health studies and Mr. Lobins testified the same. Mr. Lobins did discuss air emission issues with staff from the Department's Central Office.

While not directly part of the oil and gas permitting process, air emissions from the Geyer Well Site are subject to separate air permitting regulations. The Department's air regulations govern and limit many of the air emission activities associated with unconventional gas development. Unconventional gas wells, including those at the Geyer Wells Site, are covered by Exemption 38. Exemption 38 exempts unconventional wells and associated equipment from the requirement to obtain individual plan approvals and operating permits provided that they meet certain criteria set by the Department. (DRK Ex. A-96). Among the applicable criteria are limits on combined VOC emissions including hazardous air pollutants (HAPs) and combined NO<sub>x</sub> emissions from stationary internal combustion engines located at the wells. Rex is required to demonstrate compliance with the criteria found in Exemption 38

within 180 days of well completion. Delaware Riverkeeper presented no direct evidence that Rex failed to qualify for Exemption 38 or would be unable to meet the limits imposed on air emissions under the exemption.

Delaware Riverkeeper's main argument with the Department's use of Exemption 38 is its claim that the Department lacks the data necessary to conclude that the levels of air emissions permitted by Exemption 38 are protective of human health. The Department and Delaware Riverkeeper stipulated that the bases for the Department's belief that emissions from unconventional well sites are low enough so as not to pose a health risk are the Department's Short Term Air Studies, the operator-reported emissions data from the Department's Marcellus air inventory, and emission factors. (Parties Joint Stipulation Regarding Facts and Exhibits, Jt. Stip. 86). The same two parties stipulated that Exemption 38 does not place any limits on the proximity of an unconventional gas well to human populations and that the impact on human health from air emissions is greater the closer the pollution source is to human dwellings. (Parties Joint Stipulation Regarding Facts and Exhibits, Jt. Stips. 90-91). The Department also stipulated that it is theoretically possible to have an air pollution release that complies with Exemption 38, but that poses a human health risk. (Jt. Stip. 83). Beside the joint stipulations between the Department and Delaware Riverkeeper, there was testimony from Dr. Sahu about Exemption 38. Dr. Sahu expressed some skepticism about the use of Exemption 38, but ultimately he testified that he could not determine whether Rex would meet the criteria found in Exemption 38. As we discussed previously, Dr. Sahu's main conclusion was that there was insufficient data to determine whether the Geyer Well Site posed a risk. Delaware Riverkeeper has certainly raised issues with Exemption 38 and the air regulations but has not presented sufficient evidence to convince us that the Department's issuance of the Geyer Well Permits and Renewal Permits will

cause the unreasonable degradation, diminution, depletion or deterioration of the environment. Delaware Riverkeeper has not shown that the levels of air emissions from the Geyer Wells permitted under Exemption 38 will be exceeded or that emissions at those levels unreasonably degrade, diminish, deplete or deteriorate the environment or otherwise deny the citizens the right to clean air. It comes back to our conclusion that the air health studies presented by Delaware Riverkeeper do not support the conclusion that the air emissions associated with the Geyer Wells will cause health issues. This is consistent with the Pennsylvania Supreme Court's discussion in *Robinson Twpsh.* that as a practical matter, air and water have relative rather than absolute attributes, and the fact that the Environmental Rights Amendment should not be read as preventing all impacts to the environment nor does it call for a stagnant landscape. *Id.* at 953-954. Overall, we conclude that Delaware Riverkeeper has not shown that the air emissions from the Geyer Wells Site violate the first part of Article 1, Section 27.

The second issue we must decide is whether the Department has satisfied its trustee duties under Article 1, Section 27 by conserving and maintaining the public natural resources. This requires the Department to act with prudence, loyalty and impartiality with respect to the beneficiaries of the public natural resources impacted by the Department decision. Delaware Riverkeeper again argues that the Department's failure to conduct what it considered a proper pre-action analysis is a violation of the Department's trustee duties of prudence and impartiality. They also argue that the Department breached its duty of impartiality by treating the Geyer Well Site "as if it were no different than any other wellsite, despite the presence of a large, health-sensitive population nearby – children" and by approving an unknown amount of further degradation to local air quality in a community that they assert is already suffering from degraded air. (Appellants' Supplemental Post-Hearing Brief Regarding Article 1, Section 27 of

the Pennsylvania Constitution, p. 45-46). Ultimately, they argue that the Department failed in its trustee duty because it failed to conserve and maintain public natural resources. The Department and Rex assert that the Department's actions in this matter satisfy its trustee obligations.

We have already reviewed the issue of the Department's pre-action analysis, and based on that review, we do not think that the Department's analysis violated its trustee duties of prudence and impartiality as claimed by Delaware Riverkeeper. In *PEDF*, the Supreme Court said that the duty of prudence requires the Commonwealth "to exercise such care and skill as a man of ordinary prudence would exercise in dealing with his own property" and the duty of impartiality requires the trustee to manage the trust so as to give all of the beneficiaries due regard for their respective interests in light of the purposes of the trust. *PEDF*, 161 A.2d at 932-933. We have discussed Delaware Riverkeeper's arguments regarding the pre-action analysis extensively and disagree with Delaware Riverkeeper that the Department failed to exercise the requisite level of care and skill in evaluating the permit applications for the Geyer Wells Permits. The Department certainly took its responsibilities seriously and conducted its review of the permit applications with the care and skill of a person of ordinary prudence dealing with his or her own property. We also reject Delaware Riverkeeper's argument that the Department did not apply its greater skill and knowledge in reviewing these permit applications. The Department reviewed the Geyer Wells permit applications for over five months, significantly more time than allowed under the 2012 Oil and Gas Act. The Department relied on its regulations and its knowledge regarding the potential impacts from the proposed activity under the terms of the permits and regulations to determine that it was proper to issue the Geyer Well Permits and Renewal Permits. Delaware Riverkeeper has not convinced us that the Department failed to act prudently in reaching its permitting decision.

Delaware Riverkeeper next argues that the Department breached its duty of impartiality by treating this wellsite as if it were no different than any other wellsite. Delaware Riverkeeper contends that the Department failed to consider the children in proximity to the Geyer Well Site and the potential health impacts to those children discussed in the testimony of Dr. Paulson. Delaware Riverkeeper also contends that the Department violated its duty of impartiality by approving further degradation to local air quality in a community already suffering from degraded air. As we noted previously, we are unconvinced that the evidence presented by Dr. Paulson was sufficiently related to the particular circumstances at the Geyer Well Site to require the Department to have given it additional consideration beyond the review it conducted and the requirements outlined in the Geyer Well Permits. Further, we find that Delaware Riverkeeper has not proven that there will be unreasonable degradation of the local air quality as a result of the Department's permitting action. As such, we do not agree that the Department violated its trustee duty of impartiality by granting the Geyer Well Permits. It has not, in our opinion, failed to give due regard to the interests of the various beneficiaries of the public natural resources in the vicinity of the Geyer Well Site.

Ultimately, the Department's responsibility as trustee is to conserve and maintain the public natural resources. Delaware Riverkeeper argued that the Department failed to meet this basic responsibility because in permitting the Geyer Wells, it allowed the air and groundwater that people depend on for health and daily life to be degraded. Our understanding of the trustee responsibility does not require the Department to deny permits to any and all activity that will negatively impact the public natural resources and/or the people who use those resources. To hold otherwise would essentially prevent any permitting activity since it is nigh impossible to have development without some environmental impact. A plurality of the Pennsylvania

Supreme Court recognized as much in *Robinson Twshp.* stating “the trust’s express directions to conserve and maintain public natural resources do not require a freeze of the existing public natural resource stock.” *Id.* at 958. Further the Board has noted in prior cases, that environmental permitting contemplates some amount of environmental impact, “whether it be a discharge to waters of the Commonwealth, or the surface and subsurface disturbances associated with oil and gas development.” *Brockway Borough v. DEP*, 2015 EHB 221, 243; *aff’d*, *Brockway Borough Mun. Auth. v. Dep’t of Env’tl. Prot.*, 131 A.3d 578, 587 (Pa. Cmwlth. Ct. 2016). In this case, we find that Delaware Riverkeeper has not proven that the Department’s permitting decision allowed unreasonable degradation to the environment contrary to its constitutional responsibilities. At its most fundamental, Delaware Riverkeeper’s concerns in this case reflect its general disagreement with the current policy approach in Pennsylvania that permits the drilling and completion of unconventional natural gas wells. We, however, are tasked with looking at a particular decision of the Department and in this case, we find that the evidence presented by Delaware Riverkeeper did not demonstrate by a preponderance of that evidence that the Department’s decision to issue the Geyer Wells Permits or the Renewal Permits was unreasonable and/or in violation of either the Commonwealth’s laws or the Pennsylvania Constitution.

### **CONCLUSIONS OF LAW**

1. The Environmental Hearing Board has jurisdiction over this matter. 35 P.S. § 6018.108; 35 P.S. § 7514.
2. The Department is the agency with the duty and authority to administer and enforce the Oil and Gas Act, Act of February 14, 2012, P.L. 87, No. 13, 58 Pa. C.S. §3201-3274; the Clean Streams Law, Act of June 22, 1937, P.L. 1987, *as amended*, 35 P.S. §§ 691.1 – 691.1001 (“Clean Streams Law”); Section 1917-A of the Administrative Code of 1929, Act of

April 9, 1929, P.L. 177, as amended, 71 P. S. §510-17; and the rules and regulations promulgated thereunder.

3. The Delaware Riverkeeper Network, the Clean Air Council, David Denk, Jennifer Chomicki, Anthony Lapina and Joann Groman have standing to appeal the Department's issuance of the Geyer Wells Permits at issue in this case. (Jt. Stip. – Standing, Para. 18)

4. In third party appeals of Department actions, the appellant bears the burden of proof. 25 Pa. Code § 1021.122(c)(2).

5. As the appellant in this case, Delaware Riverkeeper must show by a preponderance of the evidence that the Department acted unreasonably or in violation of the Commonwealth's laws or the Pennsylvania Constitution. *United Refining Company v. DEP*, 2016 EHB 442, 448; *aff'd*, *United Refining Company v. Dep't. of Env'tl. Prot.*, 163 A.2d. 1125 (Pa. Cmwlth. Ct. 2017); *Brockway Borough Mun. Auth. v. Dep't of Env'tl. Prot.*, 131 A.3d 578, 587 (Pa. Cmwlth. Ct. 2016)

6. The preponderance of the evidence standard requires that Delaware Riverkeeper meet its burden by showing that the evidence in favor of its proposition is greater than that opposed to it. It must be sufficient to satisfy an unprejudiced mind as to the existence of the factual scenario sought to be established. Delaware Riverkeeper's evidence must be greater than the evidence that the Geyer Wells Permits was appropriate or in accordance with the applicable law. Delaware Riverkeeper may not simply raise an issue and then speculate that all types of unforeseen calamities may occur. *United Refining Company v. DEP*, 2016 EHB 442, 449; *aff'd*, *United Refining Company v. Dep't. of Env'tl. Prot.*, 163 A.2d. 1125 (Pa. Cmwlth. Ct. 2017).

7. The Environmental Hearing Board's role in the administrative process is to determine whether the Department's action challenged by Delaware Riverkeeper, the issuance to Rex of permits for the Geyer Wells, was reasonable, lawful and supported by our *de novo* review of the facts. *Friends of Lackawanna v. DEP*, 2017 EHB 1123, 1192.

8. The Environmental Hearing Board's *de novo* review allows the Board to admit and consider evidence that was not before the Department when it made its initial decision, including evidence developed since the filing of the appeal. *United Refining Company v. Dep't. of Env'tl. Prot.*, 163 A.2d. 1125, 1136 (Pa. Cmwlth. Ct. 2017).

9. Under the 2012 Oil and Gas Act, the Department shall issue a well permit within 45 days of submission of a permit application unless the Department denies the permit application for one or more of the reasons set forth in subsection (e.1). 58 Pa. C.S.A. § 3211 (e).

10. Under the 2012 Oil and Gas Act, the Department may deny a well permit if the issuance of the permit would result in the violation of the 2012 Oil and Gas Act or other applicable law. 58 Pa.C.S. § 3211(e.1)(1).

11. Delaware Riverkeeper failed to prove by a preponderance of the evidence that Rex's activities at the Geyer Well Site pursuant to the Geyer Wells Permits and Renewal Permits were likely to cause or did cause pollution of the waters of the Commonwealth.

12. The Department's issuance of the Geyer Wells Permits and Renewal Permits did not violate the Clean Streams Law or the regulations implementing the Clean Streams Law.

13. Under the 2012 Oil and Gas Act, it is unlawful for any person to conduct an activity related to drilling for or production of oil and gas in any manner as to create a public

nuisance or adversely affect public health, safety, welfare or the environment. 58 Pa.C.S. § 3259(2)(ii).

14. The Administrative Code provides that the Department shall have the power and its duty shall be to protect the people of the Commonwealth from nuisances. 71 P.S. §§ 510-17(1)-(3).

15. Delaware Riverkeeper failed to demonstrate by a preponderance of evidence that the Department's decision to issue the Geyer Wells Permits and Renewal Permits violated the 2012 Oil and Gas Act because Rex's activities authorized under the Geyer Wells Permits and Renewal Permits did not create a nuisance or adversely affect public health, safety, welfare or the environment as a result of, either potential or actual, water contamination, noise or air emissions.

16. The Department's decision to issue the Geyer Wells Permits and Renewal Permits did not violate the rights of Delaware Riverkeeper to clean air and pure water, and to the preservation of natural, scenic, historic, and esthetic values of the environment set forth in Article 1, Section 27 of the Pennsylvania Constitution, because Delaware Riverkeeper failed to prove by a preponderance of the evidence that the Department did not give proper consideration to the environmental effects of its permitting decision and/or that the permit decision caused the unreasonable degradation, diminution, depletion or deterioration of the environment. *Center for Coalfield Justice v. DEP*, 2017 EHB 799; *Friends of Lackawanna v. DEP*, 2017 EHB 1123; *Pa Env'tl. Def. Found. v. Commonwealth*, 161 A.3d 911 (Pa. 2017); *Robinson Township et. al. v. Commonwealth*, 83 A.3d 901 (Pa. 2013).

17. The Department's decision to issue the Geyer Wells Permits and Renewal Permits did not violate the Department's trustee duties set forth in Article 1, Section 27 of the

Pennsylvania Constitution, because Delaware Riverkeeper failed to prove by a preponderance of the evidence that the Department did not act with prudence, loyalty and impartiality with respect to the beneficiaries of the public natural resources impacted by the permit decision. *Center for Coalfield Justice v. DEP*, 2017 EHB 799; *Friends of Lackawanna v. DEP*, 2017 EHB 1123; *Pa. Env'tl. Def. Found. v. Commonwealth*, 161 A.3d 911 (Pa. 2017); *Robinson Township et. al. v. Commonwealth*, 83 A.3d 901 (Pa. 2013).

18. Delaware Riverkeeper failed to show by a preponderance of the evidence that the Department acted unreasonably or in violation of the Commonwealth's laws or the Pennsylvania Constitution in issuing the Geyer Well Permits and the Renewal Permits.



s/ Steven C. Beckman  
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**STEVEN C. BECKMAN**  
**Judge**

**DATED: May 11, 2018**

**c: DEP, General Law Division:**  
Attention: Maria Tolentino  
(via *electronic mail*)

**For the Commonwealth of PA, DEP:**  
Michael A. Braymer, Esquire  
Hope C. Campbell, Esquire  
Katherine Knickelbein, Esquire  
(via *electronic filing system*)

**For Appellants, Delaware Riverkeeper Network,  
David Denk, Jennifer Chomicki, Anthony Lapina,  
and Joann Groman:**  
Lauren M. Williams, Esquire  
Jordan B. Yeager, Esquire  
(via *electronic filing system*)

**For Appellant, Clean Air Council:**  
Joseph Minott, Esquire  
Alexander Bomstein, Esquire  
Aaron Jacobs-Smith, Esquire  
Augusta Wilson, Esquire  
(via *electronic filing system*)

**For Permittee:**  
Kevin L. Barley, Esquire  
Kevin L. Colosimo, Esquire  
(via *electronic filing system*)