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## **I. INTRODUCTORY STATEMENT**

1. Petitioners bring this Petition for Review in the Nature of an Action for Declaratory Relief seeking a declaration from this Court that Section 2 of Act 96 of 2022 (Act of Jul. 19, 2022, P.L. 1622, No. 96, hereinafter “Act 96”) violates the Environmental Rights Amendment of the Pennsylvania Constitution, Article I, Section 27. By freezing bonding amounts for conventional oil and gas wells at their current inadequate level, Section 2 of Act 96 prevents prompt remediation and clean-up of the many conventional oil and gas wells that have stopped producing or otherwise been abandoned. These wells emit harmful pollutants to the air and water on an ongoing basis, and otherwise harm Pennsylvania’s natural environment every day they remain unplugged. This pollution has infiltrated Pennsylvanians’ drinking water, saturated their air with cancer-causing chemicals, increased the risk of fatal methane explosions, forced residents to live in fear, and marred the natural environment they enjoy so much. By preventing the government from resolving this abandoned well crisis afflicting the Commonwealth, Section 2 of Act 96 violates both the trust obligations and the right to a clean and healthy environment guaranteed under the Environmental Rights Amendment.

## **II. STATEMENT OF JURISDICTION**

2. The Commonwealth Court has jurisdiction to hear this action against the Commonwealth under 42 Pa. Cons. Stat. § 761, as well as the Declaratory Judgment Act, 42 P.S. §§ 7531 *et seq.*, and the Pennsylvania Rules of Civil and Appellate Procedure.

## **III. STATUTORY AUTHORITY**

3. This action is a challenge to the constitutionality of Section 2 of Act 96. Section 2 of Act 96 amended bonding provisions for oil and gas wells, including by freezing bond amounts

for conventional wells at the current level of \$2,500 per well, eliminating the ability of the Environmental Quality Board (“EQB”) or Department of Environmental Protection (“DEP”) to adjust that amount for a period of 10 years, and establishing a blanket bonding program for conventional wells.

#### **IV. PARTIES**

4. Petitioners are the Sierra Club, Citizens for Pennsylvania’s Future (“PennFuture”), Clean Air Council, Protect PT (sometimes referred to as “Protect Penn-Trafford”), and Earthworks.

5. Petitioner Sierra Club—2101 Webster Street, Suite 1300, Oakland, California, 94612, Phone: 415-977-5500—was founded in 1892 and is the nation’s oldest grassroots environmental organization. Sierra Club is incorporated as a non-profit organization in the State of California. Sierra Club has more than 700,000 members nationwide, including over 27,000 members in Pennsylvania. Sierra Club is a leading non-governmental organization seeking to educate and mobilize the public on issues of climate change, fossil fuel energy, and clean energy. As established by the following declarations attached hereto, Sierra Club—on its own behalf and on behalf of its members—has a substantial, direct, and immediate interest in the claims set forth in this Petition:

- (a). Declaration of Laurie Barr (Exhibit A)
- (b). Declaration of Gillian Graber (Exhibit B)
- (c). Declaration of John Vanco (Exhibit C)

6. Petitioner Citizens for Pennsylvania’s Future (“PennFuture”)—610 North Third Street, Harrisburg, Pennsylvania, 17101, Phone: 717-214-7920—is an entity incorporated as a non-

profit organization in 1998 under the laws of the Commonwealth of Pennsylvania for the purpose of protecting air, water, and land, and empowering citizens to build sustainable communities for future generations. As established by the following declaration attached hereto, PennFuture—on its own behalf and on behalf of its members—has a substantial, direct, and immediate interest in the claims set forth in this Petition:

(a). Declaration of John Vanco (Exhibit C)

7. Petitioner Clean Air Council—135 South 19th Street, Suite 300, Philadelphia, Pennsylvania, 19103, Phone: 215-567-4004—is an entity incorporated as a non-profit organization in 1967 under the laws of Pennsylvania for the purpose of protecting everyone’s right to clean air and a healthy environment. As established by the following declarations attached hereto, Clean Air Council—on its own behalf and on behalf of its members—has a substantial, direct, and immediate interest in the claims set forth in this Petition:

(a). Declaration of Lois Drumheller (Exhibit D)

(b). Declaration of Melissa Ostroff (Exhibit E)

(c). Declaration of Gillian Graber (Exhibit B)

8. Petitioner Protect PT (incorporated as “Promote PT, Inc. DBA Protect PT,” and sometimes referred to as “Protect Penn-Trafford”)—3344 route 130, Suite A, Harrison City, PA 15636, Phone: 724-392-7023—is an entity incorporated as a non-profit organization in 2015 under the laws of Pennsylvania for the purpose of ensuring residents’ safety, security, and quality of life by engaging in education and advocacy to protect the economic, environmental, and legal rights of the people in Westmoreland and Allegheny counties. As established by the following declarations attached hereto, Protect PT—on its own behalf and on behalf of its



members—has a substantial, direct, and immediate interest in the claims set forth in this

Petition:

(a). Declaration of Lois Drumheller (Exhibit D)

(b). Declaration of Gillian Graber (Exhibit B)

9. Petitioner, Earthworks—1612 K St. NW, Suite 904, Washington, District of Columbia, 20006, Phone: 202-887-1872—is an entity incorporated as a non-profit organization in 1988 under the laws of Washington, DC for the purpose of protecting communities and the environment from the adverse impacts of mineral and energy development while promoting sustainable solutions. As established by the following declarations attached hereto, Earthworks—on its own behalf and on behalf of its members—has a substantial, direct, and immediate interest in the claims set forth in this Petition:

(a). Declaration of Matthew Kelso (Exhibit F)

(b). Declaration of Melissa Ostroff (Exhibit E)

10. Respondent, Commonwealth of Pennsylvania is a Constitutional Trustee of Pennsylvania’s public natural resources, as set forth in Article I, Section 27 of the Pennsylvania Constitution.

11. Respondent Governor of the Commonwealth of Pennsylvania, Josh Shapiro, is the head of the Executive Department of the Commonwealth. Article IV, Section 2 of the Pennsylvania Constitution provides that “[t]he supreme executive power shall be vested in the Governor, who shall take care that the laws be faithfully executed.”

12. Respondent, General Assembly of the Commonwealth of Pennsylvania, is vested with the legislative powers of the Commonwealth by Article II, Section 1 of the Pennsylvania

Constitution. The General Assembly passed into law Act 96, the legislation at issue in this action. The Commonwealth has recognized that the General Assembly is a trustee of Pennsylvania's environmental trust. *Pa. Env't. Def. Found. v. Commonwealth*, 285 A.3d 702, 712 (Pa. Cmmw. 2022).

## V. STANDING

13. A party may invoke the equitable jurisdiction of the Commonwealth Court upon showing that it has a substantial, direct, and immediate interest in the litigation. *Pa. Med. Soc. v. Dep't of Pub. Welfare of Com.*, 39 A.3d 267, 278 (Pa. 2012). The Supreme Court elaborated on the definition of these terms in its *South Whitehall Township* decision:

A “substantial” interest is an interest in the outcome of the litigation which surpasses the common interest of all citizens in procuring obedience to the law. A “direct” interest requires a showing that the matter complained of caused harm to the party's interest. An “immediate” interest involves the nature of the causal connection between the action complained of and the injury to the party challenging it, and is shown where the interest the party seeks to protect is within the zone of interests sought to be protected by the statute or constitutional guarantee in question.

*S. Whitehall Twp. Police Serv. v. S. Whitehall Twp.*, 555 A.2d 793, 795 (Pa. 1989) (internal citations omitted).

14. Petitioner organizations have substantial, direct, and immediate interests in this litigation because prior to the passage of Act 96 each of the five organizations spent many hours of staff time and expended additional resources preparing and advocating in support of a rulemaking petition to the EQB to increase bond amounts for conventional oil and gas wells.

15. Petitioners filed their rulemaking petition with EQB on September 14, 2021, *attached as Exhibit J*. Petitioners pursued their petition before EQB in order to secure higher bond

amounts for conventional wells, because higher bonds will result in faster remediation of abandoned conventional wells and thereby directly advance the core interests of all Petitioners.

16. EQB voted to deny that petition at its July 11, 2023 meeting on the sole basis that Section 2 of Act 96 eliminated EQB's statutory authority to grant the relief requested.

17. The Sierra Club's mission is to explore, enjoy, and protect the wild places of the earth; to practice and promote the reasonable use of the earth's ecosystems and resources; to educate and enlist humanity to protect and restore the quality of the natural and human environment; and to use all lawful means to carry out these objectives. Advocating for the prompt and proper closure of abandoned oil and gas wells in Pennsylvania is key to Sierra Club's objectives of protecting the natural environment from excess and unnecessary pollution and preserving wild places for people and wildlife to enjoy. Furthermore, Sierra Club's goal to protect and restore the human environment directly correlates with its interest in minimizing the health effects that Pennsylvanians experience by virtue of living in close proximity to unplugged abandoned wells.

18. PennFuture works to protect public health, restore and protect air, water, and land, and promote sustainable communities for future generations. Ensuring that oil and gas wells are properly closed when they stop producing is integral to this work. PennFuture thus has a direct interest in incentivizing the proper closure of abandoned wells through increased bond amounts in order to mitigate the public health consequences and air and water pollution stemming from those wells.

19. Clean Air Council is dedicated to protecting and defending everyone's right to breathe clean air. Air pollution from unplugged oil and gas wells degrades air quality, and so Clean Air

Council has a direct interest in ensuring plugging abandoned wells is properly incentivized by sufficient bond amounts.

20. Protect PT works to protect the environmental, economic, and legal rights of Westmoreland and Allegheny county residents to ensure their safety, security, and quality of life. In Westmoreland and Allegheny counties, there are hundreds of abandoned oil and gas wells. Left unplugged, these wells deteriorate air and water quality, pose serious health and safety impacts, and threaten residents' ability to enjoy the natural environment. Accordingly, ensuring that bond amounts for conventional oil and gas wells are sufficient to cover the costs of plugging abandoned wells is of great importance to Protect PT's work.

21. Earthworks protects communities and the environment from the adverse impacts of mineral and energy development, including oil and gas extraction, while promoting sustainable solutions. They are committed to collaborating with communities on the frontline, using science in innovative ways, and building people power to ensure a more just and livable future. Pennsylvania's insufficient well bond amounts result in the growing number of unplugged, abandoned oil and gas wells. Pollution from abandoned wells is exactly the kind of adverse impact on frontline communities from energy development that Earthworks fights to prevent. Earthworks thus has a direct interest in incentivizing the plugging of abandoned wells through increased bond amounts.

22. Petitioners collected over 1,114 signatures from their members in support of their petition to the EQB, and submitted those signatures to the EQB. Petitioners also lobbied elected officials to support the petition and to encourage the EQB to take the requested action by increasing conventional well bond amounts.

23. Sierra Club invested significant staff attorney time drafting the conventional well petition. Additional staff attorney time was then spent preparing for and presenting an oral presentation at the November 16, 2021 EQB meeting asking the EQB to move forward with the rulemaking petition. Sierra Club further launched a major campaign around the petition to advocate for the EQB to adopt higher bond amounts. This included sending numerous email alerts to Sierra Club members asking them to express their support for the rulemaking petition, planning and holding a webinar for members the week the petition was filed, working with members to submit Letters to the Editor in support of the petition, organizing a hiking trip with members to a park with known abandoned wells to highlight the impacts of the petition, presenting to coalition partners about the petition campaign, and advocating against Act 96 as the legislature was considering it.

24. PennFuture supported the drafting of the petition and was directly engaged in the advocacy advancing the petition with the EQB and promoting it with community members since it was filed, dedicating years of attorney time and communications and advocacy resources to this petition.

25. Clean Air Council has devoted years of advocate and attorney time to advance the petition, including extensive collaboration with Sierra Club on the drafting of the petition and the campaign for the petition.

26. Protect PT's Executive Director, Gillian Graber, served as a declarant for the petition to EQB. Ms. Graber spent several hours assisting with preparation of her declaration, including describing the harm she has suffered, and continues to suffer, from exposure to unremediated abandoned wells. Protect PT also co-hosted a hiking trip with Sierra Club and Earthworks to a

park with known abandoned wells to highlight the impacts of the petition and hosted a virtual panel to discuss the petition with its members.

27. Earthworks supported the drafting of the petition and campaigned in support, including extensive staff time meeting with administration and agency staff. Earthworks field staff provided evidence demonstrating the need to plug these low producing and inactive wells as soon as possible to prevent pollution and harm to public health. Earthworks also co-hosted a hiking trip with Sierra Club and Protect PT to a park with known abandoned wells to highlight the impacts of the petition.

28. Enactment of Act 96 rendered all of this work by Petitioners moot as to bonding for conventional wells. Section 2 of that law removed EQB's authority to grant the relief sought by Petitioners' conventional well rulemaking petition.

29. Indeed, in recommending the petition be rejected, DEP focused entirely on the fact that Section 2 of Act 96 removed EQB's authority to increase bond amounts for conventional wells. DEP's recommendation expressly stated that it was not contesting the veracity of any of the factual assertions in the petition regarding the need for increased bond amounts for conventional wells. Pa. Dep't of Env't. Prot., *Evaluation Report on the Sierra Club et al. Petition for Rulemaking to Raise Bond Amounts for Conventional Oil and Gas Wells 9* (2023), attached as Exhibit K.

30. If Section 2 of Act 96 were ruled unconstitutional, DEP and EQB could initiate proceedings to increase bond amounts for conventional wells or, if necessary, Petitioners could again petition for such action.

31. Because section 2 of Act 96 has prevented the government from acting on a petition that Petitioners spent many hours and numerous resources advancing, Petitioners have a greater interest in the outcome of this litigation than the common citizen, and thus their interest is “substantial.” Because the petition advanced efforts directly relevant to all Petitioners’ core missions, Petitioners have a direct interest in section 2 of Act 96 being ruled unconstitutional. Because the Environmental Rights Amendment was intended to protect the residents of Pennsylvania from exactly the kinds of pollution and environmental degradation caused by abandoned wells, as explained in Section VI, *infra*, Petitioners’ interest in the litigation is immediate. Petitioners therefore have standing to bring this litigation.

32. Even in the absence of a direct injury to itself, an organization has standing to bring an action on behalf of its members if at least one of its members is suffering an immediate or threatened injury as a result of the challenged action, and if that members’ interest in the litigation is substantial, direct, and immediate. *Robinson Twp., Washington Cnty. v. Com.*, 83 A.3d 901, 922 (Pa. 2013); *Pa. Med. Soc. v. Dep’t of Pub. Welfare of Com.*, 39 A.3d at 278; *North-Central Pa. Trial Laws. Ass’n v. Weaver*, 827 A.2d 550, 554 (Pa. Cmmw. Ct. 2003). Petitioner Organizations’ members and their interests are uniquely focused on addressing actual and threatened harms posed by unremediated abandoned wells in the Commonwealth. Petitioners attach here declarations from six of their members detailing the impacts unremediated abandoned wells have on those people living and working in close proximity to them. See Exhibits A-F.

33. The interests of the Petitioners’ members are distinguishable from the interests of the general public. Many of Petitioners’ members live, work, and recreate in close proximity to

dozens of abandoned and hundreds of active conventional oil and gas wells in Pennsylvania to which bonding requirements apply. Every day an abandoned well remains unplugged increases the burden on local communities through the ongoing release of additional air and water pollution.

34. Current bond amounts for conventional wells prolong the time that abandoned wells remain unremediated by failing to either incentivize prompt plugging by operators or provide adequate funds for the Commonwealth to complete the plugging.

35. By removing the authority of EQB or DEP to adjust these bond amounts for ten years, Section 2 of Act 96 prevents necessary actions that would lead to faster plugging and remediation of these wells. Therefore, Plaintiffs' members have a direct stake in the outcome of this litigation.

36. Many members have serious concerns about how living, working, and recreating in close proximity to abandoned and unplugged conventional oil and gas wells affects their health and the health of their families. Some members believe that long-term exposure to air pollution from abandoned conventional wells will have serious impacts on their health. *See* Ex. B, Graber Declaration ¶¶ 12-20, Ex. F, Kelso Declaration ¶ 16, Ex. E, Ostroff Declaration ¶ 8, Ex. D, Drumheller Declaration ¶¶ 10-12, Ex. A, Barr Declaration ¶¶ 13-14. Some frequently smell gas in spaces where they live and recreate. *See* Ex. D, Drumheller Declaration ¶¶ 9-11, Ex. C, Vanco Declaration ¶ 12, Ex. F, Kelso Declaration ¶ 16. Others are concerned about how pollution from abandoned wells may be contaminating their water supply. *See* Ex. F, Kelso Declaration ¶¶ 10-12, 15, Ex. B, Graber Declaration ¶ 15-16, 18, Ex. A, Barr Declaration ¶¶ 10-11. Members and their immediate relatives who suffer from respiratory illnesses like asthma



or other serious diseases fear that air pollution from abandoned wells exacerbates their symptoms. *See* Ex. F, Kelso Declaration ¶ 16, Ex. E, Ostroff Declaration ¶ 8, Ex. D, Drumheller Declaration ¶ 12, Ex. A, Barr Declaration ¶ 12.

37. Petitioners' members deeply value outdoor recreation, and the existence of abandoned wells in their communities threaten their ability to enjoy time outside. These members would better enjoy their time recreating and spending time outdoors, and would increase their time pursuing these activities, if nearby abandoned wells were plugged. *See* Ex. D, Drumheller Declaration ¶ 13, Ex. A, Barr Declaration ¶ 17, Ex. B, Graber Declaration ¶ 21, Ex. C, Vanco Declaration ¶ 15. For some, even the sight of oil and gas wells in natural spaces diminishes their ability to enjoy those spaces and elicits feelings of fear and anxiety about the air they and their families are breathing. *See* Ex. D, Drumheller Declaration ¶¶ 9, 13, Ex. A, Barr Declaration ¶ 16-17, Ex. B, Graber Declaration ¶ 20, Ex. C, Vanco Declaration ¶ 15.

38. Many of Petitioners' members own property that is surrounded by both abandoned and active conventional oil and gas wells. Some of these members fear that their property values are diminishing as a result of the increasing number of abandoned wells that remain unplugged. *See* Ex. F, Kelso Declaration ¶ 17. They also fear that living in close proximity to these wells could result in unpredictable explosions. *See* Ex. F, Kelso Declaration ¶ 14, Ex. C, Vanco Declaration ¶¶ 12-13, Ex. A, Barr Declaration ¶ 5. Several member's water supply was polluted by leakage that they believe occurred from or was facilitated by abandoned conventional gas wells. *See* Ex. F, Kelso Declaration ¶¶ 10-12, Ex. A, Barr Declaration ¶¶ 10-11. Several have moved or have considered moving somewhere with fewer oil and gas wells. *See* Ex. F, Kelso Declaration ¶ 17, Ex. A, Barr Declaration ¶ 7.

39. Petitioners' members suffer from the psychological consequences of living in close proximity to abandoned oil and gas wells.

40. Petitioners' members are also concerned that the active wells and wells that will be drilled in the future in their communities will not be plugged after they stop producing, due to policies currently in place.

41. Petitioners' members include environmentalists who engage in activism aimed at mitigating the impacts of the fossil fuel industry on human health and the environment.

42. Petitioners' members' concerns would be addressed if EQB and DEP regained the ability to adjust bond amounts for conventional oil and gas wells to levels that would incentivize prompt remediation by operators and would provide necessary funds to the Commonwealth to plug those wells where the operator is unable or unwilling to do so. *See* Ex. B, Graber Declaration ¶¶ 22-24, Ex. F, Kelso Declaration ¶¶ 18-19, Ex. C, Vanco Declaration ¶¶ 16-17, Ex. E, Ostroff Declaration ¶¶ 11-12, Ex. D, Drumheller Declaration ¶ 15-16, Ex. A, Barr Declaration ¶¶ 20-21. If the abandoned wells near where Petitioners' members live, work, and recreate were capped, Petitioners' members would not worry so much about their own health or the health of their families, *see, e.g.*, Ex. B, Graber Declaration ¶ 22, Ex. F, Kelso Declaration ¶ 18, and would be better able to engage in and enjoy their recreational activities, *see* Ex. D, Drumheller Declaration ¶¶ 13, 15, Ex. E, Ostroff Declaration ¶ 10.

## VI. STATEMENT OF FACTS

### A. Article I, Section 27 of the Pennsylvania Constitution—the Environmental Rights Amendment—Imposes Trustee Obligations on the Commonwealth and Creates a Right to a Clean Environment.

43. The Environmental Rights Amendment, Article I, Section 27 of the Pennsylvania Constitution (“Environmental Rights Amendment” or “Section 27”) states:

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 the people.

44. The Environmental Rights Amendment, which was ratified by voters in 1971, was in large part drafted and passed in response to the Commonwealth’s history with legacy pollution from fossil fuel extraction, particularly coal mining.

45. The Environmental Rights Amendment creates an “environmental trust,” with the Commonwealth’s natural environment as the corpus of the trust, the Commonwealth as the trustee, and the people of Pennsylvania—including future generations—as the beneficiaries of the trust.

46. The environmental trust obligations of the Environmental Rights Amendment impose on the Commonwealth the duty to prohibit the degradation, diminution, and depletion of our public natural resources, whether these harms might result from direct state action or from the actions of private parties. The Commonwealth must also act affirmatively via legislative action to protect the environment.

47. The Environmental Rights Amendment creates a right to a clean environment, and restricts the ability of the Commonwealth to act contrary to that right.

**B. Pennsylvania Currently Has Many Thousands of Abandoned Oil and Gas Wells that Require Prompt Remediation.**

48. Operators of conventional oil and gas wells in Pennsylvania are required to plug those wells upon abandonment. 58 Pa. Cons. Stat. § 3220(a).

49. A well is considered abandoned if it “has not been used to produce, extract or inject any gas, petroleum or other liquid within the preceding 12 months;” if “equipment necessary for production, extraction or injection has been removed;” or if it is “considered dry and not equipped for production within 60 days after drilling, re-drilling or deepening.” 58 Pa. Cons. Stat. § 3203.

50. DEP provides data on well status and production in several formats and locations online, including the “DEP Orphan and Abandoned Wells” database,<sup>1</sup> “Oil and Gas Well Inventory,”<sup>2</sup> and “Oil and Gas Well Production Reports.”<sup>3</sup>

51. As described in the Declaration of Mini Saraswati, PhD, *attached as Exhibit G*, analysis and cross-referencing of this data reveals that currently, there are at least 2,449 conventional oil and gas wells in Pennsylvania that qualify as abandoned wells and were spudded on or after April 18, 1985, when bonding requirements first took effect.

52. Of these, 162 are listed by the Department of Environmental Protection (“DEP”) as “DEP abandoned,” meaning they have been inspected by DEP. Exhibit G at ¶ 7.

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<sup>1</sup> Available at [http://cedatareporting.pa.gov/Reportserver/Pages/ReportViewer.aspx?/Public/DEP/OG/SSRS/Abandoned\\_Orphan\\_Web](http://cedatareporting.pa.gov/Reportserver/Pages/ReportViewer.aspx?/Public/DEP/OG/SSRS/Abandoned_Orphan_Web) (last visited August 22, 2023).

<sup>2</sup> Available at <https://greenport.pa.gov/ReportExtracts/OG/OilGasWellInventoryReport> (last visited August 22, 2023).

<sup>3</sup> Available at <https://greenport.pa.gov/ReportExtracts/OG/OilGasWellProdReport> (Last visited August 22, 2023).

53. DEP lists an additional 296 conventional wells spudded after April 17, 1985 as “abandoned.” Exhibit G at ¶ 8.

54. An additional 1,991 conventional wells spudded after April 17, 1985 reported that they produced no oil or gas in calendar year 2022, and thus meet the legal definition of an abandoned well. Exhibit G at ¶ 9.

55. All of these 2,449 conventional wells (the 162 “DEP abandoned,” 296 “abandoned,” and 1,991 non-producing in 2022 wells spudded after April 17, 1985) are subject to bonding requirements, and would be impacted by any change to bond amounts.

56. This is an exceedingly conservative bottom line estimate, because it omits the 11,620 wells with no reported spud date, and the 16,745 wells marked “active” or “regulatory inactive” with a spud date after April 17, 1985 that failed to submit any production report in 2022. Exhibit G at ¶ 7. An unknown, but likely significant, number of these wells also meet the definition of an abandoned well that would be affected by a change to bond amounts.

57. Additional wells that are currently producing will become abandoned and require plugging and remediation in the near future, adding to the inventory of abandoned unremediated wells in Pennsylvania.

58. DEP continues to issue new permits for conventional oil and gas wells. According to the database “DEP Office of Oil and Gas Management Year To Date Permits Issued By Well Type,” DEP issued 295 new conventional well permits in 2022.<sup>4</sup>

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<sup>4</sup> Available at [http://cedatareporting.pa.gov/Reportserver/Pages/ReportViewer.aspx?/Public/DEP/OG/SSRS/Permits\\_Issued\\_Count\\_by\\_Well\\_Type\\_YTD](http://cedatareporting.pa.gov/Reportserver/Pages/ReportViewer.aspx?/Public/DEP/OG/SSRS/Permits_Issued_Count_by_Well_Type_YTD) (last visited August 22, 2023).

59. The Pennsylvania Department of Conservation and Natural Resources and Pennsylvania Game Commission use a production threshold of one thousand cubic feet of gas per day (1 Mcf/day) to determine whether a well operating on state land is uneconomic—i.e. the costs to operate the well are higher than the revenue the well generates. Under standard lease terms for wells on state land, if a well produces less than 1 Mcf/day for two consecutive years, then the operator is obligated to plug that well.<sup>5</sup>

60. As described in the Saraswati Declaration, an analysis of conventional oil and gas wells spudded after April 17, 1985 with reported production in 2022 reveals that 5,384 wells, or 18% of the total, produced less than that 1 Mcf/day threshold. Under a proper regulatory system, these wells would be abandoned and plugged. Exhibit G at ¶¶ 10, 33.

61. Historic production trends for wells can be used to calculate production decline rates that predict production levels for future years.

62. By applying this analysis, it can be predicted that in 2032, the number of conventional wells spudded after April 17, 1985 producing less than 1 Mcf/day will increase to 8,682 wells, or 28.3% of all wells spudded after April 17, 1985 with any production in 2022. Exhibit G at ¶ 33.

63. Ten years later, by 2042, the number of conventional wells spudded after April 17, 1985, producing less than 1 Mcf/day will be 14,514 wells, or 47.3% of all wells spudded after April 17, 1985 with any reported production in 2022. Exhibit G at ¶ 33.64. These projected estimates of wells producing less than 1 Mcf/day necessarily include wells that will report no

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<sup>5</sup> Sample lease available at <https://elibrary.dcnr.pa.gov/GetDocument?docId=1738458&DocName=sf-Sample%20Lease.pdf> (last visited August 22, 2023).

gas production for more than 12 months and thus meet the statutory criteria for an abandoned well.

65. The Colorado Oil & Gas Conservation Commission calls a well inactive and “well below the threshold at which a well can continue to be operated profitably” once it produces less than 1 BOE/day.<sup>6</sup>

66. Using that 1 BOE/ day figure, the number of projected uneconomic conventional wells in Pennsylvania is significantly higher.

67. By 2032, the number of conventional wells spudded after April 17, 1985 producing less than 1 BOE/day will increase to 28,654 wells, or 93.5% of all wells spudded after April 17, 1985 with any production in 2022. Exhibit G at ¶ 33.

68. Ten years later, by 2042, the number of conventional wells spudded after April 17, 1985 producing less than 1 BOE/day will increase to 30,264 wells, or 98.7% of all wells spudded after April 17, 1985 with any production in 2022. Exhibit G at ¶ 33.

### **C. Abandoned Oil and Gas Wells Harm the Environment and Nearby Communities.**

69. Unremediated abandoned wells in Pennsylvania harm the environment and pose significant public health, safety, and environmental risks due to ongoing contamination of air and water. They threaten public health, exacerbate climate change, and negatively impact the natural environment.

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<sup>6</sup> “Statement of Basis, Specific Statutory Authority, and Purpose New Rules and Amendments to Current Rules of the Colorado Oil and Gas Conservation Commission, 2 C.C.R. § 404-1, Appendix B,” Colorado Energy & Carbon Management Commission, June 2021, Page 12.  
<https://ecmc.state.co.us/documents/sb19181/Rulemaking/Financial%20Assurance/COGCC%20Draft%20Financial%20Assurance%20SBP%206-15-21.pdf> (last visited August 22, 2023).

70. Documented threats to human health and the environment posed by unplugged abandoned wells include air pollution, contamination of water wells, contamination of surface and ground water, and explosions from migration of gas into buildings and residences. Dominic C. DiGiulio et al., *Chemical Characterization of Natural Gas Leaking from Abandoned Oil and Gas Wells in Western Pennsylvania*, 8 ACS OMEGA 19443 (2023).<sup>7</sup>

71. DEP has acknowledged the importance of promptly plugging oil and gas wells, stating:

Proper plugging of conventional oil and gas wells at the end of their economic life is critical for protecting public health and safety as well as the environment. Unplugged or improperly plugged wells can cause a myriad of problems, including gas migration into occupied structures, water supply impacts, surface water impacts, hazardous air pollutant emissions, methane emissions, and soil and groundwater contamination.

Pa. Dep't of Env't. Prot., *Governor's Lapsing Statement Report 7* (2022) (hereinafter *Lapsing Statement Report*), attached as Exhibit H.

72. A DEP fact sheet titled "Abandoned and Orphan Oil and Gas Wells and the Well Plugging Program" acknowledges "the recognized human health and [] environmental risks" from abandoned, unplugged oil and gas wells.<sup>8</sup>

73. A DEP presentation titled "History of Well Plugging and Risks Associated with Orphan & Abandoned Wells and Improperly Plugged Wells" recognizes that "[a]bandoned / orphan /improperly plugged wells can and have caused impacts to the environment and human health," and that prompt plugging and remediation of these wells is necessary because "[t]he longer an

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<sup>7</sup> Available at <https://pubs.acs.org/doi/pdf/10.1021/acsomega.3c00676>(last visited August 22, 2023).

<sup>8</sup> Available at <https://www.depgreenport.state.pa.us/elibrary/PDFProvider.ashx?action=PDFStream&docID=1419023&chksum=&revision=0&docName=ABANDONED+AND+ORPHAN+OIL+AND+GAS+WELLS+AND+THE+WELL+PLUGGING+PROGRAM&nativeExt=pdf&PromptToSave=False&Size=411528&ViewerMode=2&overlay=0> (last visited August 22, 2023).



abandoned wells sits, the more likely it is going to cause a problem; and it is highly probable it will cost more money to plug it.”<sup>9</sup>

74. Abandoned wells can leak volatile organic compounds (“VOCs”) such as benzene, toluene, and hexane, and dangerous methane gas (among other chemicals) into the Commonwealth’s air and water. DiGiulio et al., *supra*.

75. Benzene is widely understood to be a carcinogen. According to the U.S. EPA’s “Integrated Risk Information System,” “benzene is characterized as a known human carcinogen for all routes of exposure based upon convincing human evidence as well as supporting evidence from animal studies.”<sup>10</sup>

76. In regulating benzene, DEP relies on the health risk evaluation by the federal Agency for Toxic Substances and Disease Registry (“ATSDR”).<sup>11</sup>

77. ATSDR has found that short-term exposure to benzene “can cause drowsiness, dizziness, rapid heart rate, headaches, tremors, confusion, and unconsciousness,” and long-term exposure can cause anemia, excessive bleeding, harm to the immune system, leukemia, and harm to the reproductive system.” Agency for Toxic Substances and Disease Registry, U.S. Dep’t of Health and Human Servs., *Toxicological Profile for Benzene 5–6* (2007).<sup>12</sup>

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[https://files.dep.state.pa.us/OilGas/BOGM/BOGMPortalFiles/AbandonedOrphanWells/CFA%20Info%20Presentation\\_Part1\\_%20History\\_Risk.pdf](https://files.dep.state.pa.us/OilGas/BOGM/BOGMPortalFiles/AbandonedOrphanWells/CFA%20Info%20Presentation_Part1_%20History_Risk.pdf) (last visited August 22, 2023).

<sup>10</sup> Available at [https://iris.epa.gov/static/pdfs/0276\\_summary.pdf](https://iris.epa.gov/static/pdfs/0276_summary.pdf) (last visited August 22, 2023).

<sup>11</sup> See, e.g., *East Erie Benzene Monitoring Project*, Pa. Dep’t of Env’t. Protection

<https://www.dep.pa.gov/About/Regional/NorthwestRegion/Community-Information/Pages/Erie-Coke-Benzene.aspx> (last visited July 10, 2023).

<sup>12</sup> <https://www.atsdr.cdc.gov/toxprofiles/tp3.pdf> (last visited August 22, 2023).

78. ATSDR further has stated that animal studies that may be generalizable to humans have found benzene exposure could harm a developing fetus, causing symptoms such as low birth weight, delayed bone formation, and bone marrow damage. *Id.*

79. The Environmental Quality Board (“EQB”) has recognized the harm caused by VOC emissions from conventional wells, determining that “VOC emissions are precursors to the formation of ground-level ozone, a public health, welfare and environmental hazard. . . . Ground-level ozone is formed by a photochemical reaction between emissions of VOC and NO<sub>x</sub> in the presence of sunlight; oil and gas sources do emit these two pollutants.” Control of VOC Emissions from Conventional Oil and Natural Gas Sources, 52 Pa. Bull. 7587, 7589 (Dec. 10, 2022) (codified at 25 Pa. Code chs. 121 & 129).

80. EQB further described the human health threat posed by exposure to ozone, finding that:

Ground-level ozone is a respiratory irritant and repeated exposure to high ambient concentrations of ground-level ozone pollution, for both healthy people and those with existing conditions, may cause a variety of adverse health effects, including difficulty in breathing, chest pains, coughing, nausea, throat irritation and congestion. In addition, people with bronchitis, heart disease, emphysema, asthma and reduced lung capacity may have their symptoms exacerbated by high ambient concentrations of ground-level ozone pollution. Asthma, in particular, is a significant and growing threat to children and adults in this Commonwealth. Ozone can also cause both physical and economic damage to important food crops, forests and wildlife, as well as materials such as rubber and plastics.

Env’t. Quality Board, 52 Pa. Bull. 7587, 7589 (Dec. 10, 2022).

81. A recent peer-reviewed study that examined abandoned wells in western Pennsylvania frequently detected the VOCs benzene, hexane, cyclohexane, and heptane in gas samples from

the wells examined, and detected several of these pollutants at much higher levels in unplugged wells than in plugged wells. DiGiulio et al., *supra*.

82. The California chronic reference exposure level (“REL”), which is often used as a measure of appropriate pollution levels because emissions above that level have been shown to harm vulnerable populations such as children, states that chronic exposure to benzene above 0.001 ppmv could be harmful to human health.<sup>13</sup>

83. The DiGiulio study found the mean level of benzene at abandoned wells it surveyed to be 36 parts per million volume (“ppmv”), the median level to be 2.8 ppmv, and found a high of 250 ppmv at one well. *Id.* at 19447–48. Thus, the median well analyzed had benzene levels at about 2,800 times the REL, and one well had benzene levels at 250,000 times the REL.

84. The California REL states that chronic exposure to hexane above 1.99 ppmv could be harmful to human health. *Id.* at 19448.

85. The DiGiulio study found the mean level of hexane at abandoned wells to be 1,400 ppmv, the median level to be 160 ppmv, and found a high of 14,000 ppmv at one well. *Id.* at 19447–48. Thus, the median well analyzed had hexane levels at about 80 times the REL, and one well had hexane levels at 7,000 times the REL.

86. Abandoned wells in Pennsylvania also leak methane, which is explosive in certain concentrations and is a potent greenhouse gas. *Id.*

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<sup>13</sup> California EPA, Office of Environmental Health Hazard Assessment, Benzene Reference Exposure Levels, Final Report (June 2014), available at <https://oehha.ca.gov/media/downloads/crn/benzenerelsjune2014.pdf> (last visited August 22, 2023).

87. An evaluation of “detected gas concentrations from leakage locations at abandoned wells” in Western Pennsylvania found methane concentrations to be “often above the lower explosive limit of methane of 5%,” which is the concentration at which methane could ignite in the air. *Id* at 19448.

88. Methane is an extremely potent greenhouse gas. Methane leakage from abandoned wells “corresponds to 4–7% of estimated total anthropogenic methane emissions in PA for 2010.” Mary Kang et al., *Direct Measurements of Methane Emissions from Abandoned Oil and Gas Wells in Pennsylvania*, 111 PROC. OF THE NAT’L ACAD. OF SCI. OF THE U.S.A. 18173, 18176 (2014).<sup>14</sup>

89. To put this in context, this is equivalent to the annual greenhouse gas emissions from 200,000 to 250,000 passenger cars.

90. DEP has determined that “reducing methane leaks from the oil and gas sector is one of the essential steps needed to reduce global greenhouse gas emissions and reduce the impacts of climate change.”<sup>15</sup>

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<sup>14</sup> Available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4280601/pdf/pnas.201408315.pdf> (last visited August 22, 2023).

<sup>15</sup> *Reducing Volatile Organic Compounds and Methane in Pennsylvania*, Pa. Dep’t of Env’t. Protection, <https://www.dep.pa.gov/Business/Air/pages/methane-reduction-strategy.aspx> (last visited July 11, 2023); see also Pa. Dep’t of Env’tl. Prot., *Pennsylvania Climate Action Plan 2018* 80 (2019) (listing the plugging of abandoned wells as a cost-effective mitigation strategy that the state could take to meet its climate goals), available at <http://www.depgreenport.state.pa.us/elibrary/PDFProvider.ashx?action=PDFStream&docID=1454161&checksum=&revision=0&docName=2018+PA+CLIMATE+ACTION+PLAN&nativeExt=pdf&PromptToSave=False&Size=4617270&ViewerMode=2&overlay=0> (last visited August 22, 2023).

91. Leaking oil and gas wells in Pennsylvania also contaminate water sources. A study of streams in Pennsylvania and other parts of the northern Appalachian Basin found elevated concentrations of the pollutants arsenic, barium, and chloride in water leaking from abandoned wells. Arsenic concentrations were found to be above US Environmental Protection Agency drinking water standards at two leaking abandoned wells. Josh Woda, et al., *Methane concentrations in streams reveal gas leak discharges in regions of oil, gas, and coal development*, 737. SCIENCE OF THE TOTAL ENVIRONMENT, 140105 (2020).<sup>16</sup>

92. Arsenic contamination of drinking water, according to the DEP, can cause “increased risk of skin cancer, and there is substantial evidence that it increases the risk for cancers of the bladder, lung, kidney, liver, colon, and prostate. Non-cancer effects can include thickening and discoloration of the skin, stomach pain, nausea, vomiting, diarrhea, numbness in hands and feet, partial paralysis, and blindness.”<sup>17</sup>

93. Plugged wells produce fewer emissions than unplugged wells. For example, unplugged abandoned wells emit over twice as much methane as plugged wells. A study of abandoned wells in Western Pennsylvania determined that the median value of methane emission rates for plugged wells was 36 grams per day, and the median value for unplugged wells was 74 grams per day. DiGiulio et al., *supra*, at 19450.

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<sup>16</sup> Available at [https://www.sciencedirect.com/science/article/abs/pii/S0048969720336251?fr=RR-2&ref=pdf\\_download&rr=7f521def4fba2bc4](https://www.sciencedirect.com/science/article/abs/pii/S0048969720336251?fr=RR-2&ref=pdf_download&rr=7f521def4fba2bc4) (last visited August 22, 2023).

<sup>17</sup> *Arsenic in Drinking Water - Information for Consumers*, Pa. Dep’t of Env’t. Prot. <https://www.dep.pa.gov/Citizens/My-Water/PublicDrinkingWater/Pages/Arsenic-in-Drinking-Water.aspx> (last visited July 10, 2023).

94. The health impacts from abandoned wells are not an abstract matter, but deeply affect local communities who must live under threat from abandoned wells near their homes, schools, workplaces, and recreation areas.

95. Abandoned wells in Pennsylvania are frequently located near populated areas: “Of 18,608 documented abandoned wells with coordinates in Pennsylvania, a proximity analysis indicated that there are 499 (2.68%), 4243 (22.8%), and 17,299 (93.0%) abandoned wells within 10 m, 100 m, and 1 km of a building, respectively.” *Id.* at 19451. The study authors added that because “the actual number of abandoned wells likely exceeds the number of documented abandoned wells by almost an order of magnitude . . . the actual number of abandoned wells within 10 or 100 m of buildings in Pennsylvania and residences in Allegheny County is likely much larger than presented here.” *Id.*

96. Gillian Graber lives within two miles of at least 53 abandoned conventional wells and works within two miles of at least three abandoned conventional wells. She lives within five miles of at least 120 abandoned conventional wells and works within five miles of at least 154 abandoned conventional wells. *See Exhibit B, Gillian Graber Declaration* ¶¶ 8-9. Ms. Graber also lives within five miles of at least 259 active conventional wells. Ms. Graber is aware of, and deeply concerned about, her family’s exposure to harmful pollutants from abandoned conventional wells. As she describes in her declaration, “It is hard to overstate the fear you are forced to live with when you and your family are exposed to these kinds of chemicals every day that you know are incredibly dangerous, and that you see are already sickening your friends and neighbors. . . . No mother should have to go through this, but so many are and no one is doing anything about it.”

97. Matt Kelso had his well water—his only water source—compromised by an oil or gas well, and he believes an abandoned well could have been the source. Exhibit F, Kelso Decl. ¶ 10. There is so much gas in his well that when he tests the gas level with a flammable gas sensor, his sensor maxes out. *Id.* The water was also found to have dangerous levels of several chemicals, including chloride and bromine. *Id.* ¶ 11. As a result, he has had to pay thousands of dollars to regularly purchase jugs of water, install a water tank to hold the water, and install new plumbing to take the tank water into his home. *Id.* ¶ 10. He is very concerned about the health impacts using this polluted water for several years has had on him and his family, explaining, “It is difficult to convey the fear and anxiety that I experience as a result of the uncertainties of conventional oil and gas wells’ impacts on myself and my community.” *Id.* ¶ 14.

98. Pennsylvanians who have pre-existing conditions are especially at risk from the pollution caused by abandoned wells. Laurie Barr has lived next to numerous abandoned wells over the 20 years she has lived in Pennsylvania. Her husband has a disease called Monoclonal Gammopathy of Undetermined Significance (MGUS), and exposure to pollutants is a risk factor for it progressing into Multiple Myeloma—a type of blood cancer. Exhibit A, Laurie Barr Decl. ¶ 12. Barr explains:

I greatly worry about my husband being exposed to chemicals through the water pollution we know we’ve experienced, and from air pollution from nearby abandoned, unplugged conventional wells. I know the serious risk air and water contamination associated with active and abandoned oil and gas wells poses on him with his disease.

*Id.*

99. There are countless Pennsylvanians who are dealing with similar troubles as Ms. Graber, Ms. Barr, and Mr. Kelso because they live near abandoned wells. Further, if Pennsylvania does not adopt an effective system to ensure the timely remediation of abandoned wells, future generations of Pennsylvanians will also have to face these negative impacts. *See id.* ¶ 15 (“Long after we’re gone, these abandoned conventional wells will continue to negatively impact the health of our future generations, unless they are plugged, monitored, and re-plugged as needed.”).

100. If these wells were plugged, the amount of pollution to which these communities are exposed would decrease. As Ms. Graber says,

I believe if abandoned wells are properly plugged, some portion—and perhaps a very large portion—of the pollution that I am currently exposed to would be mitigated. I also believe that plugging the active wells and wells that will be built in the future in my community when they stop producing will mitigate the pollution that my family will be exposed to in the future.

Exhibit B, Graber Declaration ¶ 22.

101. Abandoned wells also lower the quality-of-life for the communities where they are located. Abandoned wells are an eyesore. They look like unmowed islands in fields or backyards. The metal pipes and valves from wellheads often extend about six feet into the air and can be accompanied by tanks and pumps, all of which are removed as part of plugging. *See, e.g.,* Exhibit D, Drumheller Decl. at Exhibit 1. These wells take away the peace of mind that comes from spending time in the beautiful environments in which they are often located. To Pennsylvanians who love the state’s natural environment, they are an affront. Ms. Barr explains: “It’s heartbreaking to see these abandoned wells in the [Allegheny National Forest].



This is public land. But the abandoned wells are making this land toxic and making it dangerous to our health to recreate in the [Forest].” Exhibit A, Barr Decl. ¶ 17.

**D. Effective Bonding Promotes Prompt Remediation of Abandoned Oil and Gas Wells.**

102. A properly implemented bonding system with bond amounts set at levels equivalent to remediation costs ensures that abandoned well sites will be remediated in a timely manner.

103. Bonding systems that set bonds at appropriate levels achieve this in two ways. First, they create economic incentives for operators to promptly complete remediation themselves. Second, they ensure that regulators have access to adequate resources to complete remediation in the event that the operator either cannot or will not do the plugging.

104. The Commonwealth allows well operators to satisfy the bonding requirement by providing a corporate surety bond.

105. A surety bond creates a three-party relationship among the operator, surety, and regulator under which the surety guarantees to the regulator that it will pay out the face value of the bond, and in turn the operator agrees to reimburse the surety and to pay specified fees to secure and maintain the surety bond. The surety may also require the operator to post collateral.

106. Alternatively, an operator may satisfy the bonding requirement by depositing with the Commonwealth cash, letters of credit, or negotiable bonds.

107. Appropriately priced bonds incentivize remediation by the operator due to the operator’s desire to free up capital. If an operator satisfies its bonding obligation through a surety bond, it will be motivated to promptly complete remediation in order to avoid paying the fees required to maintain the surety bond, to free up any resources posted as collateral to the

surety, and to relieve itself of the obligation to reimburse the surety in the event the bond is forfeited.

108. Similarly, if an operator satisfies its bonding obligation by depositing cash, bonds, or letters of credit, it will be motivated to promptly complete remediation in order to free up those assets for other purposes.

109. Bonding has been shown by an empirical study to increase plugging rates by operators. That study, *Drilling Like There's No Tomorrow: Bankruptcy, Insurance, and Environmental Risk*, analyzed the impact on oil and gas operator activity of imposition of a bonding requirement for oil and gas wells in Texas in 2001. Judson Boomhower, *Drilling Like There's No Tomorrow: Bankruptcy, Insurance, and Environmental Risk*, 109. AMERICAN ECONOMIC REVIEW, 391 (2019).<sup>18</sup>

110. The Boomhower study found that the bond increase resulted in a 65% decrease in the number of wells per lease where responsibility for plugging was passed on to the state. *Id.* at 421.

111. The Boomhower study further found that water quality violations by oil and gas operators fell by 25% after the higher bonds went into effect. *Id.*

112. The Boomhower study concluded that “[t]he empirical results are consistent with greater internalization of environmental costs, as predicted by theory. Prior to the bond requirement, small, financially weak operators could produce oil and gas at low private cost by avoiding environmental costs through bankruptcy. Bonding mitigated this problem.” *Id.* at 420.

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<sup>18</sup> Available at <https://pubs.aeaweb.org/doi/pdfplus/10.1257/aer.20160346> (last visited August 22, 2023).

113. These incentivizing effects depend on the required bond being set at an amount proportional to the actual costs of remediation. If bonds are too low, operators experience no financial pressure to complete remediation promptly. Instead, operators may conclude that it is more cost effective to avoid paying for remediation for as long as possible, leaving wells unplugged.

114. Appropriately priced bonds also lead to more timely and complete remediation by providing regulators with the resources to complete remediation.

115. In Pennsylvania, when an operator is unable or unwilling to plug an abandoned well, the responsibility to complete that remediation falls to the government.

116. If bond amounts are set significantly below the cost of remediation, the Commonwealth will lack the funds to complete the remediation, absent a large separate source of funding, and will avoid or delay completing that remediation. No such separate source of funding currently exists in Pennsylvania.

117. Similarly, if the Commonwealth is aware that bond amounts are inadequate to cover the costs of remediation, it may avoid enforcing plugging obligations or other regulatory requirements against an operator out of fear that such actions would prompt that operator to go out of business and pass the remediation obligations on to the Commonwealth. Properly priced bonds avoid this scenario by assuring the regulator that funds will be available to complete the work regardless of the status of the operator.

118. The U.S. Department of the Interior's Bureau of Land Management (BLM) recently recognized that these dual purposes of bonding for oil and gas wells can only be satisfied if

bonds are set at appropriate amounts. In the preamble to a proposed rulemaking to increase bond amounts for wells under federal leases from \$10,000 to \$150,000, BLM found that:

[t]he existing lease bond amount of \$10,000, established in 1960, no longer provides an adequate incentive for companies to meet their reclamation obligations, nor does it cover the potential costs to reclaim a well should this obligation not be met. This current bond requirement increases the risk that taxpayers will cover the cost of reclaiming wells in the event the operator refuses to do so or declares bankruptcy.

88 Fed. Reg. 47562, 47580 (July 24, 2023).

**E. Pennsylvania’s Current Bonding Requirements Set Bond Amounts Far Below the Actual Cost of Reclamation and Do Not Promote Timely Remediation of Abandoned Oil and Gas Wells.**

119. No operator may drill a conventional oil or gas well in Pennsylvania without express approval by DEP. 58 Pa. Cons. Stat. § 3211.

120. Among the statutory findings DEP must make before it may issue a drilling permit for a conventional oil or gas well is that the bonding requirements have been satisfied. 58 Pa. Cons. Stat. § 3211(e.1)(4).

121. Currently, under 58 Pa. Cons. Stat. § 3225, bonds for individual conventional oil and gas wells in Pennsylvania are set at \$2,500 per well.

122. Under Section 2 of Act 96, that bond amount may not be changed until 2032.

123. Operators may also use blanket bonding to satisfy bonding requirements for multiple wells simultaneously. Under 58 Pa. Cons. Stat. § 3225, blanket bond amounts for conventional wells are set at a minimum of \$25,000, not to exceed \$100,000, for all of an operator’s wells in the state.

124. Under 71 Pa. Stat. Ann. § 510-34 (West) and 58 Pa. Cons. Stat. § 3225, conventional wells drilled prior to April 18, 1985 are exempt from bonding requirements.

125. Bonds are “conditioned upon the operator's faithful performance of all drilling, water supply replacement, restoration and plugging requirements.” 58 Pa. Cons. Stat. § 3225(a)(1). Bonds remain in place “until the well has been properly plugged . . . and for a period of one year after filing of the certificate of plugging with the department.” *Id.* § 3225(a)(3),(b).

126. Should an operator be unable or unwilling to complete remediation, DEP may forfeit the bond. 25 Pa. Code § 78.312 (forfeiture determination). The proceeds from the forfeited bond are deposited into the Abandoned Well Plugging Fund, where they are available to the government to fund the cost of plugging the well they were connected to, or to plug other abandoned wells. 58 Pa. Cons. Stat. § 3225(c), 3271. Currently, the Abandoned Well Plugging Fund is funded through forfeited bonds and a \$50 surcharge on permit fees for operators seeking to drill wells. *Id.* § 3271(b).<sup>19</sup>

127. The actual cost of plugging and remediating a conventional oil and gas well in Pennsylvania far exceeds \$2,500 per well.

128. DEP’s own assessment of actual well-plugging costs for conventional wells range between \$33,000 and \$800,000. DEP itself estimates the average cost to plug a conventional

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<sup>19</sup> DEP also collects administrative enforcement and civil fees. It is unclear if these fees are deposited into the Abandoned Well Plugging Fund. *See Lapsing Statement Report* at 10. Regardless, DEP collected a relatively small amount through enforcement fees: \$1.35 million through enforcement actions from 2017 – 2021. *Id.* Assuming an average conventional well plugging cost of \$38,000 per well, as was calculated by the Weber Report discussed below, this would be sufficient to plug only 35 abandoned wells—much lower than the number of abandoned wells the state has to deal with.

well is \$33,000, and that “complications such as excess debris can cause the cost to plug these wells to increase up to \$800,000.”<sup>20</sup>

129. In its application for federal funding to plug orphan wells available under the Infrastructure Investment and Jobs Act (“IIJA”), DEP estimated that it would have to spend an average of \$68,068 per well plugged using the federal funding. Off. of Oil and Gas Mgmt., Pa. Dep’t of Env’t. Prot., *DEP Infrastructure Investment and Jobs Act (IIJA) Formula Grant Documentation 9* (2021).<sup>21</sup>

130. DEP Acting Deputy Director Kurt Klapkowski has stated that to-date DEP has spent an average of \$100,000 per well plugged using the IIJA federal funding. Kurt Klapkowski, Acting Deputy Director, Pa. Dep’t of Env’t. Prot., Remarks at the July Environmental Quality Board Meeting (July 11, 2023).

131. Dr. Jeremy Weber, Professor of Economics at the University of Pittsburgh, has estimated the cost to plug the average conventional well in Pennsylvania to be \$38,000. That analysis was based on an evaluation of data on how much DEP paid contractors to plug orphan wells from 1989 to 2020. Jeremy G. Weber, *Bonding Requirements for Oil and Gas Wells in Pennsylvania: Cost Based Recommendations 7-10* (2021) (hereinafter Weber Report) Exhibit I.

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<sup>20</sup> Tom Decker, *Plugging Pennsylvania’s Abandoned Oil and Gas Wells*, Dep’t of Env’t. Protection (Jan. 27, 2023), <https://www.dep.pa.gov/OurCommonWealth/pages/Article.aspx?post=91> (last visited August 22, 2023).

<sup>21</sup> Available at <https://files.dep.state.pa.us/OilGas/BOGM/BOGMPortalFiles/AbandonedOrphanWells/IIJA/DEP%20Formula%20Grant%20Write%20Up%2012222021.pdf> (last visited August 22, 2023).

132. These estimates are consistent with other assessments of actual plugging costs. In a recent rulemaking to increase bonding amounts for oil and gas wells on federal leases, the U.S. Bureau of Land Management “determined the cost to plug a well and reclaim the surface ranges from \$35,000 to \$200,000, with an average cost of \$71,000.” 88 Fed. Reg. 47562, 47581 (July 24, 2023).

133. Taking the conservative, bare minimum estimate of 2,449 conventional oil and gas wells spudded after April 17, 1985 that currently meet the statutory definition for an abandoned well (*see para. 51, supra*, and Exhibit G), and multiplying it by Dr. Weber’s \$38,000 per well reclamation cost estimate, produces a total remediation cost estimate of \$93,062,000.

134. If all 2,449 of those wells had individual \$2,500 bonds under the current system (which is unlikely given the low blanket bond currently in place), that would be only \$6,122,500 in bonding, leaving a total shortfall of \$86,939,500.

135. Adding in the 5,384 wells that reported oil or gas production in 2022 but were below the 1 Mcf/day threshold produces a total reclamation cost estimate of \$297,654,000, and a bonding shortfall of at least \$278,071,500.

136. The actual number of currently abandoned conventional wells to which bonding requirements apply is likely much higher, and therefore the actual bonding shortfall is also likely much higher. For example, adding the 16,745 wells marked “active” or “regulatory inactive” with a spud date after April 17, 1985 that failed to submit any production report in 2022 (*see para. 56, supra*, and Exhibit G) produces a total potential reclamation cost estimate of \$933,964,000 and a potential bonding shortfall of at least \$872,519,000.

137. These estimates do not include those wells that are currently producing oil or gas at economic levels, or wells that will be drilled in the future, that will become abandoned at some point in the next several decades.

138. The organization Carbon Tracker estimates that it would cost \$12.2 billion to plug all identified wells in Pennsylvania, and that the state has only \$47.2 million in bonding available to plug these wells.<sup>22</sup> That is a bonding ratio of 0.4 percent. In other words, 99.6 percent of the total cost of plugging all existing wells, or \$12.15 billion, is currently unaccounted for.

Although this analysis included wells not subject to bonding requirements, including orphan wells and wells drilled prior to 1985, it highlights the Commonwealth's existing remediation burden.

**F. Section 2 of Act 96 Prevents Pennsylvania Regulators from Making Needed Adjustments to Oil and Gas Bonding Requirements for Conventional Wells.**

139. In 2022, the Pennsylvania legislature passed H.B. 2644 which, in its ultimate version, includes Section 2 revoking the authority of the EQB or DEP to adjust bond amounts for conventional wells for 10 years. The bill applied no such restriction to unconventional wells, sometimes referred to as fracked wells. On July 19, 2022, Governor Wolf allowed the bill to lapse into law without his signature. The law is now referred to as Act 96 (Act of Jul. 19, 2022, P.L. 1622, No. 96).

140. Prior to the passage of Section 2 of Act 96, EQB was authorized to adjust bond amounts for all wells, including conventional wells, "every two years to reflect the projected costs to the

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<sup>22</sup> Asset Retirement Obligations (ARO) Portal State Profiles, Carbon Tracker, <https://carbontracker.org/aro-portal-state-profiles/#total-bond-amount> (last visited July 28, 2023).



Commonwealth of plugging the well.” 58 Pa. Cons. Stat. § 3225(a)(1) (2021), *amended by Act of Jul. 19, 2022, P.L. 1622, No. 96.*

141. When passing Act 96, the legislature made no findings that current bond amounts were adequate to incentivize remediation by operators or to cover the costs of remediation conducted by the Commonwealth.

142. Prior to enactment of Section 2 of Act 96, on September 14, 2021, Sierra Club and other environmental organizations filed a petition with the EQB asking the Board to raise bond amounts for individual conventional wells to \$38,000 per well. Petition *attached as Exhibit J.* The EQB voted on November 16, 2021, to accept the petition for further study.

143. As a result of the enactment of Section 2 of Act 96, DEP produced a recommendation on April 21, 2023 that EQB reject the petition due to EQB’s newly-imposed lack of authority to grant the relief requested. In making its recommendation, DEP expressly stated that it was not contesting the veracity of any of the factual assertions in the petition, and further stated that “the Department agrees the current bonding requirements for conventional oil and gas wells are insufficient.” Pa. Dep’t of Env’t. Prot., *Evaluation Report on the Sierra Club et al. Petition for Rulemaking to Raise Bond Amounts for Conventional Oil and Gas Wells 9* (2023), *attached as Exhibit K.*

144. On July 11, 2023, EQB formally voted to accept DEP’s recommendation and deny the petition. At that meeting, Kurt Klapkowski, Acting Deputy Secretary for DEP, restated DEP’s view that the bond amount frozen in place by Section 2 of Act 96 was not “adequate.”

145. Section 2 of Act 96 prevents EQB or DEP from raising bond amounts for conventional wells for 10 years for any reason, including adjustments to keep pace with inflation, or on the

basis of any new information that may come to light regarding the cost of well plugging or rates of well abandonment.

**G. Pennsylvania’s Regulatory Regime for Oil and Gas Wells Does Not Provide Alternative Means to Ensure Timely Remediation of Abandoned Wells.**

146. Appropriate bonding for conventional oil and gas wells in Pennsylvania is necessary because Pennsylvania law, as currently implemented, offers no adequate alternative means to ensure timely remediation of abandoned wells.

147. DEP itself admits that its enforcement actions have not successfully addressed the abandoned well problem. In its Lapsing Statement Report, DEP stated that its existing enforcement efforts “have not made an appreciable dent in compliance rates and numbers over the past five years.” *Lapsing Statement Report*, Exhibit H at 11.

148. In that same report, DEP made clear that its lack of effective enforcement is due to resource limitations, stating: “It cannot be emphasized strongly enough, however, that increased oversight of the conventional oil and gas industry and enforcement will require additional resources for the Department . . . . Developing a stable funding source to fund these efforts will be critical to successfully altering the current course of widespread non-compliance . . . .” *Id.* at 22–23.

149. DEP also made clear in that report that it does not expect the oil and gas industry to bring itself into compliance absent external pressure, finding that “a significant change in the culture of non-compliance as an acceptable norm in the conventional oil and gas industry will need to occur before meaningful improvement can happen” in preventing abandoned wells. *Id.* at 1.

150. A review of DEP enforcement data confirms the agency’s own conclusions regarding the ineffectiveness of current enforcement measures.

151. DEP is authorized to issue a notice of violation when an operator fails to meet its obligations under 58 Pa. Cons. Stat. § 3220 to plug an abandoned well. DEP can also, concurrent with or subsequent to issuing a notice of violation, issue an administrative order requiring that the operator plug the well within a certain time period. *Lapsing Statement Report*, Ex. H at 9. The operator has the right to contest the validity of the administrative order to the EHB within 30 days of its issuance. 58 Pa. Cons. Stat. § 3256.

152. If an operator does not comply with an administrative order, the Commonwealth can issue civil penalties on abandoned conventional wells of up to \$25,000, plus \$1,000 “for each day during which the violation continues.” *Id.* An operator can contest the issuance of the civil penalty within 30 days to the EHB, in which case it does not have to pay the penalty until the appeal is decided. *Id.* If an operator refuses to pay the civil penalty without having filed an appeal (or if it refuses after losing the appeal), DEP then has the authority to enter and docket liens in local courts against the operators’ property in the amount of the civil penalty assessed. *Id.* It can ask the court to enforce these liens through a Petition for Contempt. *Lapsing Statement Report*, Ex. H at 9.

153. In an assessment of its enforcement of violations associated with conventional wells for calendar years 2017 through 2021, DEP identified a total of 5,978 violations among the ten most frequent categories of environmental, health, and safety violations, and an additional 7,637 violations among the ten most frequent categories of administrative violations, for a total of 13,615 violations. *Lapsing Statement Report* at 8. Of these categories, the most violations

occurred in the category for “failure to plug the well upon abandoning it,” with 3,123 violations. *Id.*

154. DEP reported that during that time period, it issued a total of 1,139 notices of violation for conventional well violations. *Id.* at 10. Assuming that the list of 13,615 violations is comprehensive, and that each enforcement action relates to a separate violation, at most DEP issued notices of violation for just 8% of total violations.

155. Even assuming that some percentage of operators plugged wells themselves after receiving a notice of violation or administrative or compliance order, DEP’s data indicates that it rarely took enforcement actions against noncompliant operators.

156. DEP’s report provides that from 2017 to 2021, DEP initiated formal enforcement actions only 117 times across all of its oil and gas programs (based on a total of seven administrative orders; 14 compliance orders; and 76 consent decrees, consent assessment of civil penalties, or consent orders and agreements issued).

157. These 117 formal enforcement actions came during a time when DEP was confronted with—among other things—the 16,098 oil, gas, and combined oil and gas wells marked as “DEP Abandoned” on the DEP Orphan and Abandoned Wells list. *See Saraswati Declaration, Exhibit G, ¶ 7.*

158. While Section 2 of Act 96 eliminated the ability of EQB or DEP to raise bond amounts for conventional wells, neither that act nor any other recent act of the legislature provided DEP with additional tools or resources to increase enforcement or otherwise compel conventional well operators to plug abandoned wells.

## VII. DECLARATORY RELIEF REQUESTED

### A. Declare that unplugged abandoned conventional oil and gas wells pollute the air and water and otherwise harm the Commonwealth's public natural resources.

159. All prior paragraphs are hereby incorporated by reference.

160. Abandoned, unplugged conventional oil and gas wells produce air and water pollution harmful to human health, including air emissions of methane and volatile organic compounds (VOCs) such as benzene, toluene, and hexane; and water pollution from discharges of arsenic, barium, and chloride. This pollution degrades, diminishes, and depletes the Commonwealth's natural resources.

161. The emission of VOCs into Pennsylvania's air and water greatly harms the residents of the state. VOCs can combine to form ozone, which can cause respiratory harm. Benzene, one of the most toxic VOCs emitted by oil and gas wells, causes symptoms such as dizziness, headaches, and skin irritation from short-term exposure; and leukemia, reproductive effects, and negative consequences for fetuses from long-term exposure.

162. Methane, one of the pollutants emitted by unplugged conventional oil and gas wells, is a potent greenhouse gas that contributes to global climate change, including climate change impacts experienced directly in Pennsylvania, including more severe storms, dangerous heat waves, wildfire smoke, and harm to agricultural fields.

163. Plugged wells produce less air and water pollution than unplugged wells.

164. Abandoned oil and gas wells are eyesores that mar communities and reduce the natural beauty of the areas they are located in.

165. Pennsylvania’s air and water are essential parts of the Commonwealth’s public natural resources that Section 27 was intended to protect. Section 27 not only protects Pennsylvania’s public lands, but ensures clean air and pure water for all residents of the Commonwealth to protect their health, no matter where they live. As the Supreme Court has stated, “the concept of public natural resources includes not only state-owned lands, waterways, and mineral reserves, but also resources that implicate the public interest, such as ambient air, surface and ground water, wild flora, and fauna (including fish) that are outside the scope of purely private property.” *Robinson Twp.*, 83 A.3d at 955.

166. For all of these reasons, unremediated non-producing oil and gas wells harm Pennsylvania’s public natural resources; degrade its clean air and pure water; and endanger the natural, scenic, historic, and esthetic values of Pennsylvania’s environment.

167. Petitioners ask this court to declare that abandoned, unplugged conventional oil and gas wells harm the Commonwealth’s public natural resources every day that they remain unremediated.

**B. Declare that the trustee obligation imposed on the Commonwealth by Article I, Section 27 includes the duty to ensure that conventional oil and gas wells permitted by the Commonwealth are promptly plugged and remediated upon abandonment.**

168. All prior paragraphs are hereby incorporated by reference.

169. Section 27 creates an environmental trust, with the government of the Commonwealth as the trustee, the Commonwealth’s natural environment as the corpus of the trust, and the current and future generations residing in the Commonwealth as the beneficiaries of the trust.

This obligates the Commonwealth to conserve and maintain its public natural resources for the benefit of existing and future generations.

170. The Commonwealth has an obligation to act with prudence, loyalty, and impartiality when administering this trust.

171. The Supreme Court has stated that “the Commonwealth has a duty to prohibit the degradation, diminution, and depletion of our public natural resources, *whether these harms might result from direct state action or from the actions of private parties.*” *Pa. Env’t. Def. Found. v. Commonwealth*, 161 A.3d 911, 933 (Pa. 2017) (hereinafter *PEDF II*) (emphasis added).

172. Unplugged abandoned conventional oil and gas wells degrade, diminish, and deplete the public natural resources of the Commonwealth.

173. By granting permits for the operation of conventional oil and gas wells, the Commonwealth assumes responsibility for the resulting environmental effects of these wells. Therefore, the Commonwealth must ensure the degradation caused by these wells is remediated when the wells stop producing or are otherwise abandoned.

174. The Pennsylvania Supreme Court has already stated that the Commonwealth has a trustee obligation to mitigate the harms from oil and gas drilling. In *Robinson Township*, the Court struck down parts of Act 13 (a law regulating oil and gas drilling) that preempted localities from regulating oil and gas activities, holding that it violated Section 27. The Court’s plurality opinion, which was later supported by a majority of the court in *PEDF II*, stated:

[T]he framers and ratifiers of the Environmental Rights Amendment intended the constitutional provision as a bulwark against enactments, like Act 13, which permit development with such an immediate, disruptive effect upon how

Pennsylvanians live their lives. To comply with the constitutional command, the General Assembly must exercise its police powers to foster sustainable development in a manner that respects the reserved rights of the people to a clean, healthy, and esthetically-pleasing environment.

*Robinson Twp.*, 83 A.3d at 981.

175. The Court overturned this aspect of Act 13 because it did not allow localities to properly mitigate environmental harm from oil and gas drilling, which had the effect of degrading the corpus of the trust. In line with this opinion, the Commonwealth also has a trustee obligation to ensure oil and gas well sites are remediated after they stop producing or are otherwise abandoned.

176. This Court and the Pennsylvania Supreme Court have already specifically suggested that failing to remediate oil and gas well sites after production occurs violates the Commonwealth's Section 27 trustee obligations. This Court has stated:

[T]he failure to remedy the degradation, diminution, or depletion of the State forests and parks impacted by Marcellus wells - the very public resources harmed in order to generate these funds - may constitute a failure to preserve the trust and a dereliction of its fiduciary duties under Section 27.

*Pa. Env't. Def. Found. v. Commonwealth*, 241 A.3d 119 (Pa. Cmmw. Ct. 2020). The Pennsylvania Supreme Court has approvingly cited this language. *Pennsylvania Environmental Defense Foundation v. Commonwealth*, 279 A.3d 1194, 1207 (Pa. 2022) ("*PEDF VP*").

177. For all these reasons, when the Commonwealth authorizes the degradation of its public natural resources through the permitted construction of conventional oil and gas wells, it must ensure those well sites are remediated in a timely manner after production ceases to satisfy its trustee obligations under the Environmental Rights Amendment.



178. Petitioners ask this Court to declare that Article I, Section 27 imposes a trustee obligation to ensure conventional oil and gas wells are remediated after production ceases or the wells are otherwise abandoned.

**C. Declare that allowing abandoned conventional oil and gas wells to remain unplugged beyond statutory deadlines violates the peoples’ right to a clean environment guaranteed by Article I, Section 27.**

179. All prior paragraphs are hereby incorporated by reference.

180. Section 27 provides residents of the Commonwealth with a right to “clean air, pure water, and to the preservation of the natural, scenic, historic and esthetic values of the environment.” Pa. Const. Art. I, § 27. In order to show this right has been violated, this Court has stated that Plaintiffs must show that “the values in the first clause of the Environmental Rights Amendment are implicated” and that “the governmental action unreasonably impairs those values.” *Frederick v. Allegheny Twp. Zoning Hearing Bd.*, 196 A.3d 677, 695 (Pa. Cmmw. 2018).

181. The Supreme Court in *Robinson Township* indicated that the values protected by the first clause of Section 27 are to be interpreted broadly:

[T]he constitutional provision directs the “preservation” of broadly defined values of the environment, a construct that necessarily emphasizes the importance of each value separately, but also implicates a holistic analytical approach to ensure both the protection from harm or damage and to *ensure the maintenance and perpetuation of an environment of quality* for the benefit of future generations.

*Robinson Twp.*, 83 A.3d at 951 (emphasis added).

182. Unreclaimed abandoned conventional oil and gas wells cause serious public health consequences by polluting Pennsylvania’s air and water.

183. Unreclaimed abandoned conventional oil and gas wells greatly exacerbate climate change.

184. Unreclaimed abandoned conventional oil and gas wells mar communities and reduce the enjoyment Pennsylvanians derive from nature.

185. The longer the wells remain unremediated, the more environmental harm they cause. Because harms such as methane and hazardous VOC air pollutant emissions, as well as water pollution discharges, are ongoing, rather than one-time events, delaying remediation leads to greater cumulative environmental harm.

186. DEP has acknowledged that prompt plugging of conventional oil and gas wells is necessary to minimize environmental harm and protect communities, finding that

[p]roper plugging of conventional oil and gas wells at the end of their economic life is critical for protecting public health and safety as well as the environment. Unplugged or improperly plugged wells can cause a myriad of problems, including gas migration into occupied structures, water supply impacts, surface water impacts, hazardous air pollutant emissions, methane emissions, and soil and groundwater contamination.”

*Lapsing Statement Report at 7.*

187. For all these reasons, conventional well sites that are not promptly remediated following the cessation of production or abandonment by any other means pollute the air and water of the Commonwealth and prevent the maintenance of an environment of quality for future generations. Thus, the failure to ensure prompt remediation implicates the values Section 27 protects and impairs Commonwealth residents’ Section 27 right to a clean environment.

188. This ongoing impairment of Pennsylvanians’ right to a clean environment by wells that should have been remediated, but have not been, is unreasonable.

189. Petitioners ask this Court to declare that Article I, Section 27 imposes a duty to ensure the prompt remediation of abandoned conventional well sites harmed by drilling operations in order to protect the peoples' right to a clean environment.

**D. Declare that Section 2 of Act 96 violates Article I, Section 27 and is therefore unconstitutional because it prevents the Commonwealth from satisfying its trust obligation of ensuring that conventional oil and gas wells permitted by the Commonwealth are promptly plugged and remediated upon abandonment.**

190. All prior paragraphs are hereby incorporated by reference.

191. The current bonding regime in Pennsylvania for conventional oil and gas wells is failing to secure prompt remediation of wells.

192. Bonding is a critical tool for ensuring prompt remediation of conventional oil and gas wells that have stopped producing or have otherwise been abandoned.

193. Adequate bonding encourages prompt remediation of wells in two ways. First, it creates an economic incentive for operators to complete the remediation themselves. Second, it provides funds to the regulator to complete the remediation if necessary.

194. Adequate bonding incentivizes timely reclamation by operators by requiring operators to dedicate funds to bonding from the time a well is permitted to the time it is remediated and the bond is released. While the bond is in place, those funds are unavailable for other purposes. As such, adequate bonding provides operators with an inherent incentive to quickly plug wells and thereby satisfy criteria for the release of those funds.

195. Adequate bonding also leads to more timely remediation by providing funds for regulators to complete the work themselves when the operator is unable or unwilling to

complete the work. This is particularly true where there are no other sources of funding for the regulator to use to complete such remediation, or where such funds are inadequate.

196. Adequate bonding also allows regulators to take appropriate enforcement actions against operators, without fear that such actions could force the operator into bankruptcy or otherwise create conditions under which the operator may pass its remediation obligations onto the state.

197. Adequate bonding ensures the Commonwealth holds in trust for the people the “clean air, pure water,” and “natural scenic, historic and esthetic values of the environment” by requiring that the money needed to make the air pure, the water clean, and to return the scenic and esthetic values of drilled land will be available.

198. Enforcement and other non-bonding tools have proven ineffective at securing prompt plugging and remediation of abandoned conventional wells. In its Lapsing Statement Report, DEP stated: “Over the past five years, DEP’s OOGM has identified significant non-compliance with laws and regulations in the conventional oil and gas industry, particularly regarding improper abandonment of oil and gas wells . . .” *Lapsing Statement Report* at 1.

199. Pennsylvania has a very large number of wells that DEP has either identified as “abandoned” or that have not produced any oil or gas for over a year and thus meet the Commonwealth’s legal definition for abandoned. Of these wells, 2,449 were spudded after April 17, 1985, and therefore are subject to bonding requirements, indicating that this system is not working to stop abandonment.

200. Many other wells do not have spud dates associated with them, so may also have been abandoned under the modern bonding system.

201. Further, another 5,384 extremely low-producing and therefore uneconomic conventional wells spudded after April 17, 1985 should be plugged right now because their operating costs exceed the revenue they generate.

202. That these wells have *not* been plugged yet is likely due to operators having no incentive to plug the wells under the Commonwealth's current extremely low bond amounts.

203. The gap for these 7,833 abandoned or uneconomic wells—between what would be required if bond amounts were set at the actual average remediation cost of \$38,000 per well, and bonding based on the current rate of \$2,500—is \$278,071,500.

204. The number of abandoned wells in Pennsylvania will increase significantly in coming years. Of currently economic conventional wells subject to bonding requirements, 47.3%—or 14,514 wells—will become either abandoned or uneconomical by 2042 (98.7%—or 30,264 wells—if we use a more expansive definition of uneconomical). These wells will need to be plugged and remediated to prevent further environmental harm.

205. DEP continues to issue new permits for conventional oil and gas wells.

206. The Pennsylvania General Assembly passed Act 96 (P.L. 1622, No. 96) on July 7, 2022. Act 96 then lapsed into law without the Governor's signature on July 19, 2022.

207. Section 2 of Act 96 amended the Oil and Gas Act to eliminate the authority of EQB or DEP to adjust bonding levels for conventional oil and gas wells for a period of ten years. 58 Pa. Cons. Stat. § 3225(a)(1).

208. Section 2 of Act 96 freezes individual bond amounts at \$2,500. 58 Pa. Cons. Stat. § 3225(a)(1).

209. Section 2 of Act 96 also fixes blanket bond amounts for conventional wells at a minimum of \$25,000, not to exceed \$100,000, for all of an operator’s wells in the state. 58 Pa. Cons. Stat. § 3225(a)(2)(ii).

210. If a blanket-bonded operator has more than 40 conventional wells, the per well bond amount will be less than \$2,500.

211. Prior to passage of Act 96, EQB had discretionary authority to amend bond amounts “every two years to reflect the projected costs to the Commonwealth of performing well plugging.” 58 Pa. Cons. Stat. § 3225(a)(1) (2021), *amended by* Act of Jul. 19, 2022, P.L. 1622, No. 96.

212. Section 2 of Act 96 precludes EQB from raising conventional bond amounts for the next ten years for any reason, including in response to inflation, to rulemaking petitions requesting an increase, or to any other factors affecting the actual costs of well remediation.

213. Prior to passage of Act 96, the EQB was considering a petition by Petitioners to this lawsuit to amend the bonding regulations at 25 Pa. Code § 78.302 to increase bond amounts for conventional oil and gas wells to \$38,000, to set conventional well blanket bond amounts to the sum of total per-well bond amounts, and to require DEP and EQB to continue to evaluate additional bond adjustments. The EQB had voted at its November 16, 2021 meeting to accept the petition for further study. *See* Acceptance of Two Rulemaking Petitions for Study, 51 Pa. Bull. 7471 (Dec. 4, 2021).

214. The effect of Section 2 of Act 96 is to arbitrarily lock individual conventional well bonding levels at \$2,500 per well, and blanket bonding at no more than \$100,000, for ten years.

No matter what changes may occur to inflation or to other drivers of costs for well remediation, EQB may not alter these bond amounts.

215. The legislature lacks the knowledge or expertise to determine appropriate bonding levels of conventional oil and gas wells. The legislature did not consult with EQB or DEP prior to passage of Section 2 of Act 96.

216. In a report to EQB on the bonding petition following passage of Act 96, DEP determined that “the Department agrees the current bonding requirements for conventional oil and gas wells are insufficient.” Pa. Dep’t of Env’t. Prot., *Evaluation Report on the Sierra Club et al. Petition for Rulemaking to Raise Bond Amounts for Conventional Oil and Gas Wells 9* (2023). Despite this finding, DEP determined that EQB was compelled by Section 2 of Act 96 to deny the bonding petition.

217. An expert economist has determined that the actual costs to plug and remediate conventional wells in Pennsylvania is many times higher than current bonding levels. Dr. Jeremy Weber, Professor of Economics at the University of Pittsburgh and an expert in the economics of oil and gas production, determined that the cost of plugging the average conventional well will be \$38,000 if the Commonwealth employed plugging contracts akin to those that the Commonwealth has employed since 2011. Weber Report at 15.

218. DEP itself estimates the average cost to plug a conventional well is \$33,000, and has spent an average of \$100,000 per orphan well plugged using federal funding provided under the Infrastructure Investment and Jobs Act (IIJA).

219. By freezing conventional well bonding amounts at less than 10% of the costs of the average well remediation, Section 2 of Act 96 ensures that bonds will not incentivize

remediation by well operators, and that any forfeited bonds will be inadequate to pay for the actual remediation.

220. Conventional well bonds are currently so low that DEP does not even find it worth the administrative cost to forfeit the bonds. In the Lapsing Statement Report, DEP stated, “Forfeiture of bonds is available as a compliance and enforcement measure, but involves significant expenditure of limited legal resources. Historically, DEP has generally not forfeited bonds due to the relatively small amount of money in question.” *Lapsing Statement Report* at 12.

221. Because the current bond amount required for conventional oil and gas wells is so low compared to the actual cost of well remediation, well operators have a financial incentive to delay remediation and simply pay the low cost to maintain the bonds.

222. Because DEP does not have access to other adequate funding to remediate abandoned wells, Section 2 of Act 96 therefore causes DEP to allow conventional oil and gas wells that require remediation to remain unremediated, creating ongoing environmental harm.

223. Outside of bonding, DEP lacks the resources or means to otherwise compel timely remediation of conventional oil and gas wells that have stopped producing or otherwise been abandoned. In the Lapsing Statement Report, DEP states that “to effectively administer increased oversight of the conventional oil and gas industry’s compliance with Pennsylvania’s environmental laws, DEP will require additional resources.” *Lapsing Statement Report* at 1.

224. When passing Section 2 of Act 96, the Legislature did not take any additional action to either provide an alternative source of funding for the Commonwealth to use to remediate abandoned conventional wells, or to provide DEP with additional resources to enforce



remediation requirements and compel operators to remediate their abandoned wells. Nor has the Legislature otherwise provided such resources.

225. Because DEP is required by 58 Pa. Cons. Stat. § 3211(e) to issue permits authorizing new oil and gas wells except under a very limited set of circumstances, Section 2 of Act 96 violates the trust provisions of Article I, Section 27 by prohibiting EQB or DEP from setting bond amounts for those wells at levels necessary to ensure timely remediation of environmental harm caused by those wells, including in the event that the operator goes out of business or otherwise defaults on its obligation to complete well plugging

226. By eliminating the ability of the EQB to adjust conventional bond amounts to reflect the projected costs to the Commonwealth of plugging the well, or for any reason, Section 2 of Act 96 deprives the Commonwealth of the ability to balance the desire for oil and gas production against the need to minimize the environmental harm caused by such production by ensuring prompt plugging and remediation.

227. Petitioners ask this Court to declare that Act 96 violates Article I, Section 27 and is therefore unconstitutional because it prevents Pennsylvania from satisfying its trust obligation to ensure that abandoned conventional oil and gas wells are promptly remediated.

**E. Declare that Section 2 of Act 96 violates Article I, Section 27 and is therefore unconstitutional because it violates the public's right to a clean and healthy environment by allowing abandoned oil and gas wells to continue emitting pollutants and otherwise harming public natural resources.**

228. All prior paragraphs are hereby incorporated by reference.

229. For all of the reasons stated previously, Section 2 of Act 96 results in wells remaining unplugged and unremediated for longer than they otherwise would, because it deprives DEP of resources to complete remediation, and fails to incentivize operators to complete remediation.

230. Unremediated abandoned conventional oil and gas wells generate air and water pollution on an ongoing basis and otherwise harm the Commonwealth's natural environment.

231. Pennsylvania residents cannot avoid exposure to harmful emissions and discharges from abandoned conventional wells. Wells are located in communities, and in areas where Pennsylvania citizens like to recreate, including state forests and state parks.

232. By preventing DEP and EQB from increasing bond amounts for conventional oil and gas wells for ten years, Section 2 of Act 96 allows wells to remain unremediated for longer than they would if bonds were set at appropriate levels. Section 2 of Act 96 therefore delays remediation and allows greater ongoing pollution emissions and discharges, which interferes with the public right to "clean air, pure water, and to the preservation of the natural, scenic, historic and esthetic values of the environment" guaranteed by Article I, Section 27 of the Constitution.

233. Freezing bond amounts at levels inadequate to lead to prompt remediation of this impairment caused by abandoned conventional oil and gas wells is unreasonable.

234. Current Commonwealth policy authorizes ongoing degradation of Pennsylvania's clean air and pure water through permitting of new conventional oil and gas wells. Prior to enactment of Section 2 of Act 96, EQB and DEP possessed the authority to minimize this environmental harm by adjusting bond amounts for these wells to levels adequate to ensure prompt remediation by operators or DEP. Enactment of Section 2 of Act 96 by the legislature removed

this discretion without any sound basis and prevented regulators from adopting the evidence-based policies needed to minimize environmental harms from conventional oil and gas drilling. Doing so was unreasonable.

235. Petitioners ask this Court to declare that Section 2 of Act 96 violates Article I, Section 27 and is therefore unconstitutional because it violates the public's right to a clean and healthy environment by causing abandoned conventional oil and gas wells to remain unremediated and to continue emitting pollutants and otherwise disturbing the environment.

### CONCLUSION

236. For all of the foregoing reasons, Petitioners respectfully request that this Court grant the requested declaratory relief.

Dated: August 23, 2023

Respectfully submitted,



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Council*

**VERIFICATION**

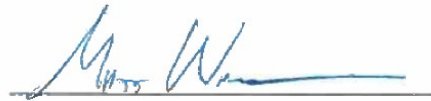
I, Matthew Walker, hereby verify that:

- (a) I am the representative for Petitioner Clean Air Council in this action;
- (b) I am authorized to make this Verification; and
- (c) The facts set forth in the foregoing Verified Petition for Review are true and

correct to the best of my knowledge, information, and belief.

I declare under penalty of perjury that the foregoing is true and correct.

Dated: August 22, 2023



Matthew Walker  
Advocacy Director, Clean Air Council

**VERIFICATION**

I, Andrew Forkes-Gudmundson, hereby verify that:

- (a) I am the representative for Petitioner Earthworks in this action;
- (b) I am authorized to make this Verification; and
- (c) The facts set forth in the foregoing Verified Petition for Review are true and

correct to the best of my knowledge, information, and belief.

I declare under penalty of perjury that the foregoing is true and correct.



Dated: August 18, 2023

---

Andrew Forkes-Gudmundson  
Senior Manager for State Policy, Earthworks

**VERIFICATION**

I, Patrick McDonnell, hereby verify that:

- (a) I am the representative for Petitioner PennFuture in this action;
- (b) I am authorized to make this Verification; and
- (c) The facts set forth in the foregoing Verified Petition for Review are true and

correct to the best of my knowledge, information, and belief.

I declare under penalty of perjury that the foregoing is true and correct.

Dated: August 22, 2023



---

Patrick McDonnell  
President and CEO, PennFuture

**VERIFICATION**

I, Gillian Graber, hereby verify that:

- (a) I am the representative for Petitioner Protect Penn-Trafford in this action;
- (b) I am authorized to make this Verification; and
- (c) The facts set forth in the foregoing Verified Petition for Review are true and

correct to the best of my knowledge, information, and belief.

I declare under penalty of perjury that the foregoing is true and correct.

Dated: August 18, 2023



---

Gillian Graber  
Executive Director, Protect Penn-Trafford



**VERIFICATION**

I, Thomas Schuster, hereby verify that:

- (a) I am the representative for Petitioner The Sierra Club in this action;
- (b) I am authorized to make this Verification; and
- (c) The facts set forth in the foregoing Verified Petition for Review are true

and correct to the best of my knowledge, information, and belief.

I declare under penalty of perjury that the foregoing is true and correct.

Dated: August 22, 2023



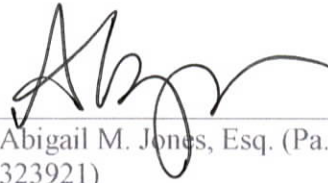
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Thomas Schuster  
Pennsylvania Chapter Director,  
The Sierra Club

**CERTIFICATION**

I certify that this filing complies with the provisions of the *Public Access Policy of the Unified Judicial System of Pennsylvania: Case Records of the Appellate and Trial Courts* that require filing confidential information and documents differently than non-confidential information and documents.

Dated: August 23, 2023



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**CERTIFICATE OF SERVICE**

I, Abigail M. Jones, hereby certify that, on August 23, 2023, I caused a true and correct copy of the foregoing Verified Petition for Review in the Nature of an Action for Declaratory Relief to be served via United States Postal Service certified mail on Respondents, as follows:

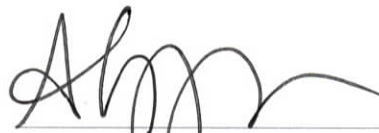
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Philadelphia, PA 19139

Office of the Pennsylvania Senate President Pro Tem  
Senator Kim L. Ward  
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