

**UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS**

CONSERVATION LAW FOUNDATION, INC.;
GREENROOTS, INC.; MOTHERS OUT
FRONT, INC.; CATHERINE BORDON;
CLAIRE CORCORAN; SARAH FREEMAN;
JUDITH FOSTER; ROBERT KENDALL; JOHN
KYPER; STEPHEN LIN; JOHN LYONS; ROY
SMITH; DENNIS SULLIVAN; TIM
WILLIAMSON,

Plaintiffs,

v.

NATIONAL GRID USA; BOSTON GAS
COMPANY d/b/a/ NATIONAL GRID;
NATIONAL GRID USA SERVICE COMPANY,
INC.,

Defendants.

Case No. 24-_____

COMPLAINT and JURY DEMAND

November 12, 2024

INTRODUCTION

1. Defendants' pipeline system, which delivers natural gas to customers in Massachusetts, leaks methane chronically and persistently due to Defendants' use of unreliable pipeline materials and Defendants' slipshod and unhurried approach to detection and repair.
2. Defendants' gas leaks damage the local environment by damaging and killing public shade trees, exacerbating heat in urban environments, causing fires and explosions, and in a variety of other ways documented in this Complaint.
3. Below, Plaintiffs allege specific facts showing how Defendants' mismanagement of their pipeline system has violated and continues to violate federal and state law, and how those violations have harmed and continue to harm Plaintiffs.
4. Plaintiffs bring this action for Defendants' violations of the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. §§ 6921 *et seq.*; Pipeline Safety Act ("PSA"), 49 U.S.C. §§

60101 *et seq.*; the Massachusetts Public Shade Tree Law, M.G.L. ch. 87, §§ 1–14; the Massachusetts Environmental Citizen Suit Statute, M.G.L. ch. 214, § 7A; and for Defendants’ negligence and creation of public nuisances.

5. Plaintiffs seek damages, injunctive relief, declaratory relief, civil penalties, reasonable litigation costs, and any relief the Court deems proper to remedy Defendants’ violations.

PARTIES

Plaintiffs

6. Plaintiff Conservation Law Foundation, Inc. (“CLF”) is a nonprofit, member-supported environmental advocacy organization incorporated in Massachusetts and headquartered at 62 Summer St., Boston, MA 02110. CLF works on behalf of its 5,600 members in New England and with other environmental and community-based organizations to enforce environmental laws, including RCRA, the PSA, and state environmental laws. CLF advocates to improve the quality of and access to natural resources and reduce the use of fossil fuel as an energy source in Massachusetts.

7. Plaintiff GreenRoots, Inc. is a resident-led organization incorporated in Massachusetts and headquartered at 90 Everett Ave., Ste. 10, Chelsea, MA 02150. GreenRoots is dedicated to improving and enhancing the urban environment and public health in Chelsea, East Boston, and surrounding communities through deep community engagement and empowerment, youth leadership, and innovative projects and campaigns. GreenRoots, *inter alia*, researches and mitigates the effects of extreme heat, plants trees in the City of Chelsea, and plans and implements climate resilience measures.

8. Plaintiff Mothers Out Front, Inc. is a member-led climate justice organization incorporated in Massachusetts and headquartered at 82 Wendell Ave., Ste. 100, Pittsfield, MA 01201. Mothers Out Front includes mothers, sisters, aunts, grandmothers, and other caregivers

who make climate justice a priority issue and work to ensure a just transition from fossil fuels toward a clean and renewable energy future where children and families can thrive, not just survive. Mothers Out Front, *inter alia*, testifies in administrative proceedings related to natural gas infrastructure, leads campaigns to spread awareness about the harms of gas leaks, and researches the health effects of natural gas pollution.

9. Plaintiff Catherine Bordon is a CLF member and resides at 303 Marlborough St., Boston, MA 02116.

10. Plaintiff Claire Corcoran is a CLF member and resides at 81 Montgomery St., Boston, MA 02116.

11. Plaintiff Sarah Freeman is a CLF member and resides at 22 Arborway, Jamaica Plain, MA 02130.

12. Plaintiff Judith Foster is a CLF member and resides at 207 Wilkins Glen Rd., Medfield, MA 02052.

13. Plaintiff Robert Kendall is a CLF member and resides at 888 Washington St., Apt. 903, Boston, MA 02111.

14. Plaintiff John Kyper is a CLF member and resides at 111 Centre St., Roxbury, Massachusetts 02119.

15. Plaintiff Stephen Lin is a CLF member and resides at 206 Metropolitan Ave., Unit 3, Boston, MA 02131.

16. Plaintiff John Lyons is a CLF member and resides at 176 Walnut St., Dorchester, MA 02122.

17. Plaintiff Roy Smith is a CLF member and resides at 27 Saranac St. #3, Dorchester, MA 02122.

18. Plaintiff Dennis Sullivan is a CLF member and resides at 1 Brigham St., Apt. 2, Boston, MA 02128.

19. Plaintiff Tim Williamson is a CLF member and resides at 15 Pondview Ave., Jamaica Plain, MA 02130.

20. Plaintiffs' lawsuit covers gas leaks and resulting harms in the City of Chelsea and the following Boston neighborhoods: Chinatown, Dorchester, East Boston, Jamaica Plain, Mattapan, Roslindale, Roxbury, South End, and Back Bay (the "affected neighborhoods").

Defendants

21. Defendant National Grid USA is a corporation incorporated under the laws of Delaware. Defendant National Grid USA's principal office is located at 170 Data Dr., Waltham, MA 02451.

22. Defendant Boston Gas Company d/b/a National Grid ("Boston Gas") is a corporation incorporated under the laws of Massachusetts. Defendant Boston Gas Company's principal office is located at 170 Data Dr., Waltham, MA 02451. Defendant Boston Gas's net income was \$212.56 million for the year ending on March 31, 2024.¹

23. In 2019, Colonial Gas d/b/a National Grid merged with and into Boston Gas, and the surviving company is known as Defendant Boston Gas.

24. Defendant National Grid USA Service Company, Inc. is a corporation incorporated under the laws of Massachusetts. Defendant National Grid USA Service Company, Inc.'s principal office is located at 170 Data Dr., Waltham, MA 02451.

25. Defendant Boston Gas and Defendant National Grid USA Service Company, Inc. are wholly owned subsidiaries of Defendant National Grid USA.

¹ BOSTON GAS COMPANY D/B/A NATIONAL GRID, FINANCIAL STATEMENTS (2024), <https://www.nationalgrid.com/document/152371/download>.

26. National Grid USA directly finances Defendant Boston Gas’s gas infrastructure projects, leads clean energy projects by Defendant Boston Gas, and controls environmental compliance of its subsidiaries, including Defendant Boston Gas.

27. Defendant Boston Gas owns and operates natural distribution pipelines in Massachusetts.

28. Defendant National Grid USA Service Company, Inc. has appeared and testified in public proceedings related to gas pipelines on behalf of Defendant Boston Gas, leads gas system regulatory issues for Defendant Boston Gas, and develops strategies to meet net-zero greenhouse gas emissions for Defendant Boston Gas.

29. Defendants share corporate officers and directors.

30. National Grid plc is the indirect parent company of all Defendants. As of November 2024, the total dollar value of National Grid plc’s outstanding shares was \$63.33 billion.²

JURISDICTION AND VENUE

31. This Court has subject matter jurisdiction over the Parties and this action under 42 U.S.C. § 6972 (RCRA citizen suit provision), 49 U.S.C § 60121 (PSA citizen suit provision), 28 U.S.C. § 1331 (federal question), 28 U.S.C. § 1367 (supplemental jurisdiction), 28 U.S.C. § 2201 (declaratory judgment), and 15 U.S.C. § 1116 (injunctive relief).

32. The complaint alleges and seeks relief for harms that the Court is empowered to redress. 42 U.S.C. § 6972(a); 49 U.S.C § 60121(a); M.G.L. ch. 214, § 7A; 28 U.S.C. §§ 2201–02; 15 U.S.C. § 1116.

33. Each Plaintiff is a “person” under the RCRA citizen suit provision, the PSA citizen suit provision, and the Massachusetts Environmental Citizen Suit Statute, and each have authority to

² *National Grid*, COMPANIES MARKET CAP, <https://companiesmarketcap.com/national-grid/marketcap/> (last visited Nov. 7, 2024).

bring this lawsuit. 42 U.S.C. §§ 6903(15), 6972; 49 U.S.C §§ 60101(17), 60121(a); 1 U.S.C. § 1; M.G.L. ch. 214, § 7A.

34. On August 13, 2024, Plaintiffs, by and through their counsel, notified Defendants of their intent to file suit under RCRA, the PSA, and the Massachusetts Environmental Citizen Suit Statute in a letter via registered mail (“Notice Letter”), in compliance with the notice requirements of RCRA, 42 U.S.C. § 6972(b)(2); the PSA, 49 U.S.C. § 60121; and the Massachusetts Environmental Citizen Suit Statute, M.G.L. ch. 214, § 7A.

35. A true and accurate copy of Plaintiffs’ Notice Letter is attached as Exhibit 3. The Notice Letter is incorporated by reference herein. Each Defendant received the Notice Letter. Copies of return receipts are attached as Exhibit 4.

36. Plaintiffs sent copies of the Notice Letter to the U.S. Environmental Protection Agency (“EPA”), the Citizen Suit Coordinator of the U.S. Department of Justice, the Attorney General of Massachusetts, the Massachusetts Department of Environmental Protection (“DEP”), the Massachusetts Department of Public Utilities (“DPU”), the Tree Warden and City Arborist of the City of Boston, and the Commissioner of the Department of Public Works of the City of Chelsea. Each of these government entities received the Notice Letter. Copies of return receipts are attached as Exhibit 5.

37. The date of this Complaint is more than ninety days after Plaintiffs mailed Defendants the Notice Letter. 42 U.S.C. § 6972(b); 49 U.S.C § 60121(a); M.G.L. ch. 214, § 7A.

38. As of the filing of this Complaint, Defendants have not acted to redress the violations identified in the Notice Letter and this Complaint.

39. As of the filing of this Complaint, neither the EPA nor DEP has commenced and diligently prosecuted a civil action or taken administrative action to redress the RCRA violations alleged in this Complaint. 42 U.S.C. § 6972(b).

40. As of the filing of this Complaint, DPU has not commenced and diligently prosecuted a judicial proceeding or taken administrative action to redress the PSA violations alleged in this Complaint. 49 U.S.C. § 60121(a).

41. On July 19, 2024, DPU issued a final order against National Grid that addressed violations not at issue in this Complaint. D.P.U. Dkt. 23-PL-27.

42. The RCRA, PSA, Massachusetts Environmental Citizen Suit Statute, and other state law violations complained of in the Notice Letter are continuous or reasonably likely to reoccur. Defendants remain in violation of RCRA, the PSA, the Massachusetts Environmental Citizen Suit Statute, and other state laws.

43. Pursuant to 28 U.S.C. § 1367, Plaintiffs invoke this Court's subject matter jurisdiction over Plaintiffs' state law claims arising under the laws of the Commonwealth of Massachusetts. Plaintiffs' state law claims are so related to Plaintiffs' claims under federal law that they form part of the same case or controversy and derive from a common nucleus of operative facts.

44. Pursuant to 42 U.S.C. § 6972(a) and 28 U.S.C. § 1391(b), venue is proper in the District of Massachusetts because the RCRA violations and the events and omissions giving rise to Plaintiffs' claims occurred in Massachusetts; the gas leaks and associated harms occurred in Massachusetts; Plaintiffs are located in this judicial district; and Defendants have official places of business and perform duties with respect to the subject matter of this Complaint in this District.

STATEMENT OF FACTS

Defendants' Leaking Gas Pipelines

45. In Massachusetts, Defendants own, operate, and maintain 11,193 miles of underground gas distribution mains and 770,505 service pipelines (collectively, “pipelines” or “pipeline system”).³

46. Distribution mains are pipelines that carry gas from city gates (where larger transmission pipelines connect to the local distribution network) for distribution in a city. The diameter of distribution mains is usually between 2–36 inches, and they usually lay beneath streets.⁴

47. Service pipelines are smaller pipelines that lay perpendicular to distribution mains that carry gas from mains to customer meters. The diameter of service pipelines is usually between 0.5–2 inches.⁵

48. Defendants installed some of these pipelines as long ago as the 1800s.

49. Defendants' pipelines are made of leak-prone materials, such as cast iron, wrought iron, steel, and certain plastics.⁶

50. Cast iron and wrought iron are brittle and susceptible to cracking.⁷

³ D.P.U. Dkt. No. 23-GSEP-03, Calendar Year 2024, GSEP (Ex. NG-GPP-2), at 8 (Oct. 31, 2023), <https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/18158845>.

⁴ *Natural Gas Distribution*, MASS. DPU, <https://www.mass.gov/info-details/natural-gas-distribution> (last visited July 7, 2024); NATIONAL GRID, CHARACTERISTICS OF NATIONAL GRID PIPELINES (2014), https://firstresponder.ngridsafety.com/ngrid-panel-review/module1/story_content/external_files/Characteristics%20of%20NGrid%20Pipelines.pdf.

⁵ *Natural Gas Distribution*, MASS. DPU, *supra* note 4; NATIONAL GRID, CHARACTERISTICS OF NATIONAL GRID PIPELINES, *supra* note 4.

⁶ D.P.U. Dkt. No. 23-GSEP-03, Calendar Year 2024, GSEP, *supra* note 3, at 15.

⁷ AM. GAS FOUND., GAS DISTRIBUTION INFRASTRUCTURE: PIPELINE REPLACEMENT AND UPGRADES 2 (2012), <https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/docs/07-2012%20Gas%20Distribution%20Infrastructure%20-%20Pipeline%20Replacement%20and%20Upgrades.pdf>; *Cast and Wrought Iron Inventory*, U.S. DEP'T OF TRANPS. PHMSA, <https://www.phmsa.dot.gov/data-and-statistics/pipeline-replacement/cast-and-wrought-iron-inventory> (last updated Nov. 7, 2024).

51. Steel is susceptible to corrosion, especially when the ground or the inside of the pipeline is moist.⁸
52. Certain plastic pipelines are subject to cracking.⁹
53. In 2019, DPU deemed pre-1985 plastic “leak-prone” because of its likelihood of cracking.¹⁰
54. Frost heaves (or ice in the soil) cause pipelines to crack and thus leak.¹¹
55. Vibrations and weight from construction equipment and traffic can cause pipelines to crack. 49 C.F.R. §§ 192.721, 192.755.
56. Earth movement and geological hazards, including floods, can impact the integrity of pipelines. 84 Fed. Reg. 18919.
57. Massachusetts is in a moderate earthquake zone and experiences a few small earthquakes per year.¹²
58. Leaks often occur at the connection joints of pipelines, e.g., because the gas dries out the material sealing the joints.¹³

⁸ AM. GAS FOUND., GAS DISTRIBUTION INFRASTRUCTURE: PIPELINE REPLACEMENT AND UPGRADES 2, *supra* note 7, at 2.

⁹ *Id.* at 3.

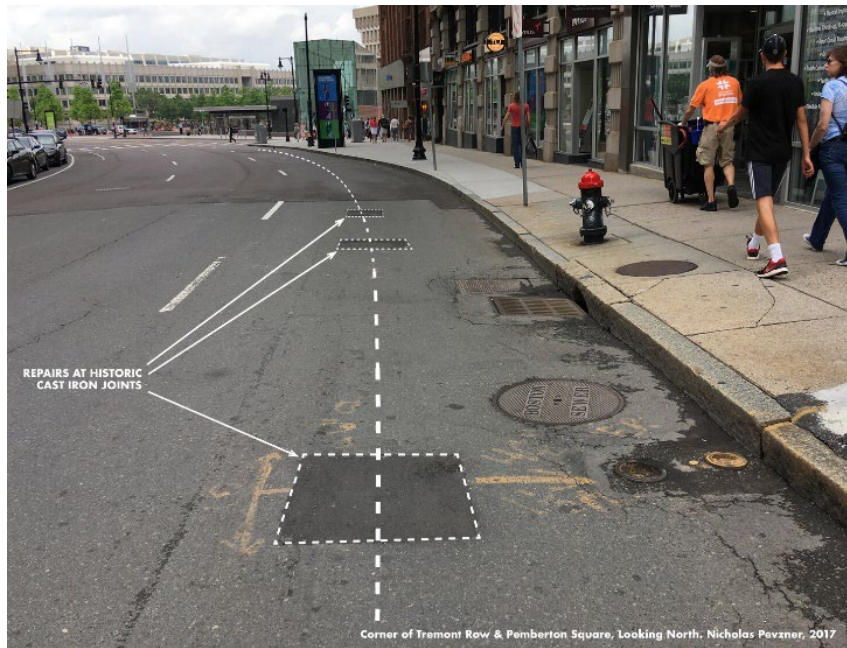
¹⁰ D.P.U. Dkt. No. 18-GSEP-03, Order, at 31 (Apr. 30, 2019), <https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/10670448>.

¹¹ AM. GAS FOUND., GAS DISTRIBUTION INFRASTRUCTURE: PIPELINE REPLACEMENT AND UPGRADES 2, *supra* note 7, at 2.

¹² *Earthquake Safety Tips*, MASS. EMERGENCY MGMT. AGENCY, https://www.mass.gov/info-details/earthquake-safety-tips?_gl=1*1wmpasx*_ga*Mjk1MTMzODQxLjE2ODczNzE5OTU.*_ga_MCLPEGW7WM*MTcwNjcyOTQwNi4xLjEuMTcwNjczMDc1OS4wLjAuMA (last visited Jan. 31, 2024); *Earthquake Hazards Program*, U.S. GEOLOGICAL SURVEY, <https://earthquake.usgs.gov/earthquakes/eventpage/us6000lzwtr/region-info> (last visited Jan. 31, 2024).

¹³ *Cast and Wrought Iron Inventory*, U.S. DEP’T OF TRANPS. PHMSA, *supra* note 7.

59. Where Defendants' iron pipelines exist underground, joints connect individual pipelines every twelve feet, as illustrated in the photograph below.¹⁴



60. When cast iron, wrought iron, steel, certain plastic pipelines, and joints degrade or crack, natural gas escapes through the cracks.

61. During June through September 2024, 8,634 detected gas leaks were present in Defendants' service area.

62. During June through September 2024, 779 detected gas leaks were present in the affected neighborhoods.

63. The oldest active gas leak in Defendants' pipeline system is 33 years old.

64. Defendants admitted that gas leaks from their pipelines were responsible for the loss of almost nine million pounds of gas in 2023.¹⁵

¹⁴ *Mapping Methane*, NICK PEVZNER, <https://www.mappingmethane.com/boston> (last visited Sept. 10, 2024).

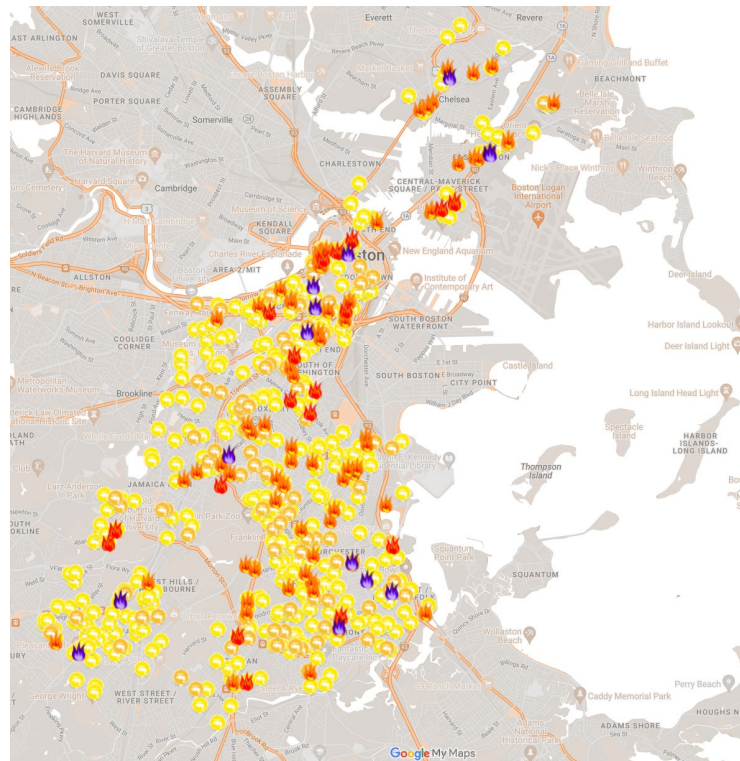
¹⁵ See D.P.U. Dkt. No. 24-LAUF-01, Boston Gas Annual Report on LAUF, at 2 (Mar. 15, 2024), <https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/18753540>.

65. Studies show that members of the gas industry, including Defendants, vastly underreport gas leaks.¹⁶

66. In Massachusetts, “Independent researchers typically find 1.5 to 3 times as many leaks as utilities report.”¹⁷

67. Every calendar quarter, Defendants submit gas leak reports to DPU, and as of September 30, 2024, Defendants report that there are 544 active gas leaks in the affected neighborhoods.

68. Below is a map of Defendants’ hazardous leaks that are or were active in the most recent quarter, as well as all other active leaks, in the affected neighborhoods.¹⁸



¹⁶ E.g., Maryann R. Sargent et al., *Majority of US Urban Natural Gas Emissions Unaccounted for in Inventories*, PROCS. NAT’L ACAD. SCI., Oct. 2021, <https://doi.org/10.1073/pnas.2105804118>; Zachary D. Weller et al., *A National Estimate of Methane Leakage from Pipeline Mains in Natural Gas Local Distribution Systems*, 54 ENV’T SCI. TECH. 8958 (2020), <https://pubs.acs.org/doi/pdf/10.1021/acs.est.0c00437>.

¹⁷ *Massachusetts Gas Leaks Maps*, HEET, <https://www.heet.org/the-gas-leaks-map> (last visited Oct. 15, 2024).

¹⁸ *2024 Gas Leaks & Gassed Trees in Boston and Chelsea*, GOOGLEMAPS, <https://www.google.com/maps/d/u/1/viewer?mid=1BGLfenkJLaIWkK8X5NrzN5jcMY8q5fA&ll=42.33832564421064%2C-71.0528246245267&z=12> (last updated Nov. 11, 2024).

69. In the affected neighborhoods, of the 779 gas leaks occurring in June through September 2024, Defendants eliminated only 235 of them.

70. In the affected neighborhoods, on average, every quarter, Defendants detect 146 new hazardous gas leaks that pose an imminent threat of explosion and fire.

71. From 2016–2020, on average, 72% of the gas leaks that Defendants identified were due to calls from the public complaining about a gas leak odor.¹⁹

72. Defendants admit that some people cannot smell gas leaks because of diminished sense of smell, odor fatigue (from extended exposure), and odor fade (due to physiochemical changes, inconsistent odor application, or low-odorant levels).²⁰

The Harms of Gas Leaks

Gas Leaks Cause Explosions and Fires

73. The natural gas running through Defendants’ pipelines is “pipeline grade natural gas,” which is 95–98% methane by composition.²¹

74. Methane is highly flammable.

75. When methane concentrations (measured as a percentage of total air gases) are in the explosive range in an enclosed space, any ignition source will cause an explosion or fire.

76. The lower bound of methane’s explosive range is the lower explosive limit (“LEL”), and the upper bound of the explosive range is the upper explosive limit (“UEL”).

77. The LEL of methane is approximately 5%, and the UEL is 15%.

¹⁹ See D.P.U. Dkt. No. 21-GSEP-03, AG6-1 (Mar. 8, 2022), <https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/14591788>.

²⁰ *Odor Fade and Purging Operations*, NATIONAL GRID, <https://www.nationalgridus.com/NY-Home/Natural-Gas-Safety/Odor-Fade> (last visited Sept. 10, 2024).

²¹ *Overview of the Oil and Gas Industry*, EPA, <https://www.epa.gov/natural-gas-star-program/overview-oil-and-natural-gas-industry> (last updated Apr. 15, 2024).

78. Enclosed spaces are any spaces where methane can accumulate and include tunnels, manholes, ducts, conduits, crawlspaces, electrical service boxes, valve boxes, meter boxes, homes, and buildings.
79. Methane can be ignited by static electricity; electric sparks and arcs from electrical appliances, motors, and light switches; mechanical sparks from friction, falling objects, tools, and machinery, lightning; and open flames like matches, lit cigarettes, and fireworks.
80. The most common source of methane ignition inside manholes is arcing and frayed wiring from underground cable, telephone, and electrical systems.
81. Arcing occurs when an electrical charge leaps across a gap in a wire or between two wires.
82. Electrical wires can be damaged in a variety of ways, including circuit failure, aging, corrosive chemicals, rodent biting, and water damage.
83. The U.S. Department of Transportation directs people in the presence of a gas leak to not start any electrical equipment, use telephones or cellphones, unplug plugs from electrical outlets, cause any open flames, or ring doorbells.²²
84. Defendants direct people in the presence of a gas leak to not touch “any electrical or light switches, doorbells, phones, or anything that could cause a spark such as any appliances or thermostats.”²³

²² *Pipeline Leak Recognition and What to Do*, U.S. DEPT. OF TRANSP., <https://www.phmsa.dot.gov/safety-awareness/pipeline/pipeline-leak-recognition-and-what-do> (last updated May 25, 2017).

²³ *Report a Gas Emergency*, NATIONAL GRID, <https://www.nationalgridus.com/MA-Home/Natural-Gas-Safety/report-a-gas-emergency> (last visited Sept. 10, 2024).

85. Even when methane concentrations are not squarely within the explosive range, such concentrations are still dangerous because methane concentrations fluctuate and can reach explosive levels.
86. Gas leaks from pipelines in the street migrate into homes and buildings where methane can accumulate to concentrations in the explosive range.
87. Defendants state that methane in enclosed spaces is an emergency even when methane is not in the explosive range and when natural gas is detected near but not inside an enclosed space.²⁴
88. Soil conditions (including moisture level and type), pressure, temperature, wind, and surface conditions impact methane migration by affecting the amount and speed at which methane from outside can travel to an enclosed space.
89. Infrastructure located above or around the leaking pipeline can affect methane migration.
90. When methane is vented from an enclosed space, such as by temporarily removing a manhole cover or drilling holes, methane can accumulate and reach explosion concentrations after the venting is complete if the source of the gas leak is not eliminated.
91. Gas leaks in Massachusetts have caused devastating explosions and fires, resulting in lost lives and destroyed homes.
92. In 2022, gas leaks caused two manhole covers (each weighing about 200 pounds) to explode in the Financial District of Boston, shattering windows and injuring one person.
93. In 2021, a gas leak migrated into the basement of a Maynard resident's home and ignited when the resident turned on a light switch.

²⁴ D.P.U. Dkt. No. 22-ERP-05, National Grid Massachusetts Gas Emergency Response Plan, at 33 (July 8, 2022), <https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/15178101>.

94. In 2019, gas leaks caused 12 manhole covers to explode in Brookline where residents had been smelling gas for years.

95. In 2018, a gas leak ignited and fueled flames as high as a two-story home for more than 24 hours in Roslindale.

96. Gas leaks cause road, business, school, and medical center closures.

Gas Leaks Poison Trees, Exacerbating the Heat Island Effect and Heat-Related Illnesses

97. Methane is a greenhouse gas that is more than 28 times as potent as carbon dioxide at trapping heat in the atmosphere.

98. According to the International Energy Agency, methane is responsible for about 30% of the rise in global temperatures since the Industrial Revolution.²⁵

99. In 2015, the number of 90°F+ days per year in Massachusetts was 22—this number will almost double by 2030.²⁶

100. As temperatures increase, the heat island effect worsens.

101. The heat island effect refers to urbanized areas, like Boston and Chelsea, that experience higher temperatures than outlying areas.

102. In urban areas, structures like buildings, pavement, and roads absorb and re-emit the heat from the sun more than natural landscapes.²⁷

103. The temperature difference between a heat island and outlying areas can be as great as 60°F.²⁸

²⁵ *Methane and Climate Change*, INT’L ENERGY AGENCY, <https://www.iea.org/reports/global-methane-tracker-2022/methane-and-climate-change> (last visited Nov. 7, 2024).

²⁶ *Preparing for Heat*, CITY OF BOS., <https://www.boston.gov/departments/environment/preparing-heat> (last updated June 26, 2023).

²⁷ *Heat Island Effect*, EPA, <https://www.epa.gov/heatislands> (last updated Oct. 30, 2024).

²⁸ *Learn About Heat Islands*, EPA, <https://www.epa.gov/heatislands/learn-about-heat-islands> (last updated Aug. 20, 2024).

104. In the summer of 2017, the City of Chelsea recorded land surface temperatures reaching nearly 140°F.²⁹

105. According to the EPA, heat is “a leading weather-related killer” in the U.S.,³⁰ as excess heat contributes to and exacerbates health problems such as heat cramps, heat exhaustion, and heat stroke.³¹

106. According to the Commonwealth of Massachusetts, the consequences of extreme heat include premature deaths, reduced quality of school time and cognitive function, and occupational injuries.³²

107. Hundreds of people are hospitalized in Massachusetts every year due to heat-related illnesses.³³

108. The cities of Boston and Chelsea recognize that heat islands worsen existing health conditions, such as asthma, diabetes, and respiratory and cardiovascular diseases.³⁴

²⁹ CITY OF CHELSEA, URBAN HEAT ISLAND MITIGATION PROJECT FINAL REPORT (2021), [5.4 chelsea_uhi_report.pdf \(revize.com\)](#).

³⁰ *Climate Change Indicators: Heat-Related Deaths*, EPA, <https://www.epa.gov/climate-indicators/climate-change-indicators-heat-related-deaths> (last updated Aug. 16, 2024).

³¹ *Heat Island Impacts*, EPA, <https://www.epa.gov/heatislands/heat-island-impacts> (last updated Aug. 20, 2024).

³² MASS. EOEEA, MASSACHUSETTS CLIMATE CHANGE ASSESSMENT 34–35 (2022), <https://www.mass.gov/doc/2022-massachusetts-climate-change-assessment-december-2022-volume-ii-statewide-report/download>.

³³ Miriam Wasser, *Most New England States Don't Track 'Heat-Related' Deaths. Experts Say That's a Problem*, WBUR (Aug. 31, 2023), <https://www.wbur.org/news/2023/08/31/heat-waves-mortality-excess-deaths-climate-change>.

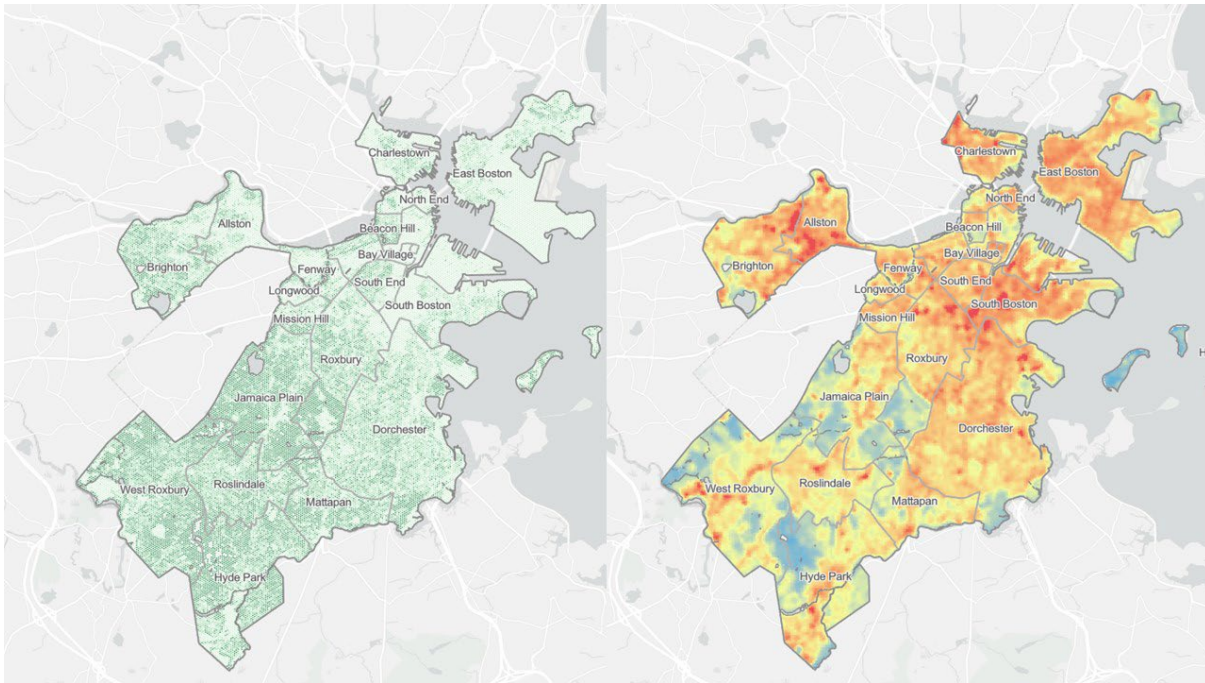
³⁴ CITY OF BOS., HEAT RESILIENCE SOLUTION FOR BOSTON 38 (2022), https://www.boston.gov/sites/default/files/file/2022/04/04212022_Boston%20Heat%20Resilience%20Plan_highres-with%20Appendix%20%281%29.pdf; CITY OF CHELSEA, URBAN HEAT ISLAND MITIGATION PROJECT FINAL REPORT, *supra* note 29, at 3.

109. The Commonwealth of Massachusetts concludes that the “[l]oss of urban trees further exacerbates extreme heat health effects” and “[i]ncreasing tree canopy cover is a favored solution to combat impacts of extreme heat, especially in urban areas.”³⁵

110. EPA and the cities of Boston and Chelsea highlight that increasing tree canopy helps reduce the heat island effect and lower temperatures.³⁶

111. A recent study showed that maximizing tree cover in a city can help reduce emergency medical visits by 47%, and even more in environmental justice communities.³⁷

112. In Boston, communities with less tree cover experience higher temperatures, as the following pictures show.³⁸



³⁵ MASSACHUSETTS CLIMATE CHANGE ASSESSMENT, *supra* note 32, at 5, 32, 37–38.

³⁶ *Benefits of Trees and Vegetation*, EPA, <https://www.epa.gov/heatislands/benefits-trees-and-vegetation> (last updated Sept. 26, 2024); CITY OF CHELSEA, URBAN HEAT ISLAND MITIGATION PROJECT FINAL REPORT, *supra* note 29, at 11.

³⁷ Scott Sheridan et al., *Increasing Tree Cover and High-Albedo Surfaces Reduces Heat-Related ER Visits in Los Angeles, CA*, 68 INT’L J. BIOMETEOROLOGY 1603 (2024), <https://doi.org/10.1007/s00484-024-02688-4>; see M.G.L. ch. 30, § 62.

³⁸ *Tree Canopy vs Other Variables*, SPEAK FOR THE TREES, <https://experience.arcgis.com/experience/ae4b00f4f94d466cabfdaa4779b0b18f/> (last visited May 1, 2024).

113. Trees are a vital part of the community and environment and provide several public health and ecosystem benefits.
114. Trees reduce surface and air temperatures by providing shade, which blocks daytime solar radiation.
115. Trees reduce surface and air temperatures by using heat from the air to evaporate water, a process called evapotranspiration.³⁹
116. Because of trees' cooling properties of providing shade and evapotranspiration, trees are crucial for diminishing the heat island effect in urban areas.
117. Trees provide oxygen as a byproduct of photosynthesis.
118. Trees remove harmful air pollutants like ozone, sulfur dioxide, and nitrogen dioxide.
119. Trees absorb stormwater and protect against flooding.
120. Trees take in carbon dioxide from the air, which helps mitigate climate change.
121. Trees grow food, wood, and medicinal herbs.
122. Trees provide habitat for living organisms like birds, insects, bats, frogs, and squirrels.
123. The federal government recognizes that spending time near trees improves mental health and cognitive function, reduces stress and anxiety, lowers blood pressure, and helps recovery from medical ailments.⁴⁰
124. Defendants' gas leaks are damaging and killing trees in Boston and Chelsea.
125. Methane from Defendants' gas leaks migrates into tree pits and the soil surrounding trees.

³⁹ EPA, REDUCING URBAN HEAT ISLANDS: COMPENDIUM OF STRATEGIES 2–3 (2017), https://www.epa.gov/sites/default/files/2017-05/documents/reducing_urban_heat_islands_ch_2.pdf.

⁴⁰ *Mentally and Physically, Trees Make a Difference*, U.S. DEPT. OF AGRIC. (May 16, 2024), <https://www.usda.gov/media/blog/2024/05/16/mentally-and-physically-trees-make-difference#:~:text=Studies%20have%20shown%20that%20trees,window%20can%20speed%20recovery%20time>.

126. Methane removes oxygen and moisture from the soil.
127. Methane increases the proliferation of methane-eating microbes that decrease oxygen levels in the soil.
128. Trees need oxygen and moisture in their soil to survive because oxygen is essential for root respiration and nutrient uptake.
129. Trees need soil that contains approximately 20% oxygen and no more than 0.1% methane.⁴¹
130. Methane and corresponding low oxygen in the soil can result in stunted tree growth, wilting, epicormic budding, crown dieback (progressive death of branches from top down), and other symptoms of stress.
131. Methane and corresponding low oxygen in the soil make trees weaker and more vulnerable to external pests, diseases, and disruption.
132. Once a tree's health declines by 50%, the tree can no longer heal and will die.
133. Defendants admit that "dead vegetation" is a sign of a gas leak.⁴²
134. Defendants have compensated people for damage and death to trees that Defendants' gas leaks caused.
135. Chapter XIII of Boston's Municipal Code states that gas leaks "injur[e]" and "kill[]" trees.⁴³
136. Massachusetts defines an environmental justice population as:

a neighborhood that meets 1 or more of the following criteria: (i) the annual median household income is not more than 65 per cent of the statewide annual median

⁴¹ Ana Maria Carmen Ilie & Carmela Vaccaro, *Atmospheric and Soil Methane Concentrations Integrating a New Gas Detection Technology*, PROCS. ASEC, Nov. 2020, <https://doi.org/10.3390/ASEC2020-07564>.

⁴² *Report a Gas Emergency*, NATIONAL GRID, *supra* note 23.

⁴³ BOS., MASS., MUNICIPAL CODE § 13-1.4 (2016), https://codelibrary.amlegal.com/codes/boston/latest/boston_ma/0-0-0-15234.

household income; (ii) minorities comprise 40 per cent or more of the population; (iii) 25 per cent or more of households lack English language proficiency; or (iv) minorities comprise 25 per cent or more of the population and the annual median household income of the municipality in which the neighborhood is located does not exceed 150 per cent of the statewide annual median household income.

M.G.L. ch. 30, § 62.

137. In environmental justice communities, explosion-and-fire-causing and tree-killing gas leaks are more prevalent and are left unrepaired for longer than in other communities.⁴⁴

138. Environmental justice communities are especially vulnerable to pollution because persons living there have existing health burdens and limited access to green space.⁴⁵

139. The heat island effect in environmental justice communities, such as Chinatown, Dorchester, East Boston, Jamaica Plain, Mattapan, Roslindale, and Roxbury, which have less tree cover and experience higher temperatures, is worse than that experienced in non-environmental justice communities.⁴⁶

140. Environmental justice communities are particularly vulnerable to the effects of extreme heat because of limited access to air conditioning.⁴⁷

141. According to the Commonwealth of Massachusetts, the rate of estimated premature deaths from extreme heat is 22% higher in environmental justice communities compared to the rest of the Commonwealth.⁴⁸

⁴⁴ Marcos Luna & Dominic Nicholas, *An Environmental Justice Analysis of Distribution-Level Natural Gas Leaks in Massachusetts, USA*, 162 ENERGY POL'Y 112778 (2022), <https://doi.org/10.1016/j.enpol.2022.112778>.

⁴⁵ MASS. EOEEA, MASSACHUSETTS ENVIRONMENTAL JUSTICE POLICY (2021), <https://www.mass.gov/doc/environmental-justice-policy6242021-update/download>.

⁴⁶ CITY OF BOS., HEAT RESILIENCE SOLUTION FOR BOSTON, *supra* note 34, at 26, 44; Alison Kuznitz, *Neighborhoods in Mass. Could Get More Shade from Trees Under New Climate Bill*, WBUR (May 5, 2023), <https://www.wbur.org/news/2023/05/05/tree-canopy-heat-island-shade-climate>; Vince Dixon, *In Boston's Redlined Neighborhoods, the Summer's Heat Waves Are Even Hotter*, BOS. GLOBE (Aug. 1, 2024), <https://apps.bostonglobe.com/metro/graphics/2024/08/racial-wealth-gap-heat-disparity/>.

⁴⁷ MASSACHUSETTS CLIMATE CHANGE ASSESSMENT, *supra* note 32, at 36.

⁴⁸ *Id.*

Defendants’ Gas Leak Repairs and Pipeline Replacements Do Not Prevent Further Leaks

142. When a gas leak occurs, Defendants will sometimes repair the pipeline.

143. A repair failure occurs when, after a leak is repaired, a new gas leak is reported at the same location.⁴⁹

144. “Super failures” occur when new gas leaks repeatedly reoccur at the site of former repairs.⁵⁰

145. A local 2021 study found that 20% of gas leak repairs are repair failures, and that a portion of these repair failures are super failures.⁵¹

146. Causes of repair failures include temporary fixes that do not eliminate the gas leak(s), e.g., venting gas through drill holes; failing to prevent the re-emergence of gas leaks along leak-prone pipelines; and failing to eliminate all gas leaks in the vicinity.⁵²

147. Defendants sometimes identify repair failures as soon as within three months after an initial repair.

148. To address the unsafe consequences of leak-prone pipelines in the long term, the Gas Leaks Act requires Defendants to implement a Gas System Enhancement Plan (“GSEP”), which is an annual plan to make infrastructure changes to reduce leak-prone pipelines and gas leaks overall. M.G.L. ch. 164, § 145(b).

149. Methods to reduce leak-prone pipelines and leaks include replacing older, leak-prone pipelines with new pipelines, and the substitution of gas delivery systems with “non-emitting renewable thermal energy infrastructure.” *Id.* § 145(a).

⁴⁹ Morgan R. Edwards et al., *Repair Failures Call for New Policies to Tackle Leaky Natural Gas Distribution Systems*, 55 ENV’T. SCI. TECH. 6561, 6562 (2021), <https://doi.org/10.1021/acs.est.0c07531?rel=cite-as&ref=PDF&jav=VoR>.

⁵⁰ *Id.* at 6565.

⁵¹ *Id.* at 6563, 6565.

⁵² *Id.* at 6565–66.

150. From 2025 to 2040, Defendants plan to spend \$9.45 billion—costs they will pass on to customers—to replace 2,172 miles of leak-prone pipeline.⁵³

151. Newly replaced pipelines continue to leak.

152. In the past five years, 229 new leaks in the affected neighborhoods appeared on 50.9 miles of mains or service lines replaced under GSEP.

153. In the past five years, Defendants eliminated less than 1% of total eliminated hazardous leaks in the affected neighborhoods via pipeline replacement each year.

154. In the affected neighborhoods, in the past four years, Defendants eliminated less than 10% of the total leak extent via pipeline replacement each year.

155. The substitution of geothermal energy supply for gas delivery is a safe and feasible alternative to address chronic gas leaks.⁵⁴

156. To “avoid[] leak prone pipe [] replacement,” Defendants are exploring the use of geothermal energy.⁵⁵

157. In 2022, Defendants announced their Clean Energy Vision, a plan announced to “to fully eliminate fossil fuels from both our gas and electric systems by 2050.”⁵⁶

158. “Networked geothermal” and “targeted electrification” through air-source heat pumps is one of the four pillars of Defendants’ Clean Energy Vision.⁵⁷

⁵³ D.P.U. Dkt. No. 20-80, Independent Consultant Report-Appendix 4, GSEP Investment Forecast (Mar. 18, 2022), <https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/14633268>.

⁵⁴ D.P.U. Dkt. No. 21-24, Initial Filing Vol I of II (Ex. FOH-1), at 11 (Feb. 18, 2021), <https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/13163224>; see D.P.U. Dkt. No. 20-80, Order, at 2 (Dec. 6, 2023), <https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/18297602>.

⁵⁵ D.P.U. Dkt. No. 21-24, Initial Filing Vol I of II, *supra* note 54, at 10.

⁵⁶ NATIONAL GRID, OUR CLEAN ENERGY VISION 4 (2022), <https://www.nationalgrid.com/document/146251/download>.

⁵⁷ *Id.* at 7.

159. In Dorchester and Lowell, Defendants have initiated networked geothermal projects.⁵⁸

The Harms of Gas Leaks to Plaintiffs

160. Plaintiffs live, work, and recreate in the affected neighborhoods of Chinatown, Dorchester, East Boston, Jamaica Plain, Mattapan, Roslindale, Roxbury, South End, and Back Bay, as well as the City of Chelsea.

161. Gas leaks are pervasive across all the affected neighborhoods. *Supra* ¶ 68; Ex. 6; Ex. 7; Ex. 8; Ex. 9; Ex. 10.

162. Gas companies advise staying at least 350 feet away from a gas leak.⁵⁹

163. Plaintiffs have lived, worked, and recreated in the affected neighborhoods for decades and have long-standing ties to their neighborhoods.

164. Living in an urban environment, Plaintiffs form special bonds with the trees in their neighborhoods—bonds of deep personal, historical, and aesthetic importance to plaintiffs.

165. Plaintiffs value the trees in their neighborhoods for the aesthetic, recreational, health, and ecosystem benefits of trees, including mitigation of the heat island effect and protection against extreme heat.

166. Plaintiffs are concerned about the impact of Defendants' gas leaks on themselves, their families, and their properties, given the risk of gas-fueled explosions and fires.

⁵⁸ *Mayor Michelle Wu Announces Agreement Between Boston Housing Authority and National Grid to Develop Networked Geothermal Heating at Franklin Field Apartments*, NATIONAL GRID (Jan. 25, 2024), <https://www.nationalgridus.com/News/2024/01/Mayor-Michelle-Wu-Announces-Agreement-Between-Boston-Housing-Authority-and-National-Grid-to-Develop-Networked-Geothermal-Heating-at-Franklin-Field-Apartments/>; *National Grid Breaks Ground on Geothermal Borehole on UMass Lowell Campus*, NATIONAL GRID (Apr. 19, 2023), <https://www.nationalgridus.com/News/2023/04/National-Grid-Breaks-Ground-on-Geothermal-Borehole-on-UMass-Lowell-Campus/>.

⁵⁹ *What Should I Do If I Smell Gas?*, PSE&G, <https://nj.pseg.com/outageandgasleaks/ismellgas#:~:text=Immediately%20exit%20the%20building%20and,report%20a%20potential%20gas%20leak> (last visited Nov. 6, 2024).

167. The dangers posed by Defendants' gas leaks adversely affect Plaintiffs' enjoyment of their neighborhoods.

168. Plaintiffs reduce or alter their commutes, recreation, and other activities due to concerns about the risk of explosions and fires from Defendants' gas leaks.

169. Plaintiffs' aesthetic enjoyment of their neighborhoods is adversely affected by damaged and dying trees and vegetation caused by Defendants' gas leaks.

170. Plaintiffs are concerned about the environmental impacts of Defendants' gas leaks and excessive methane emissions.

171. In the affected neighborhoods, Plaintiffs own or rent properties that are either located at or in close proximity to Defendants' gas leaks.

172. Plaintiffs include organizations dedicated to protecting the well-being of children, preserving green space for residents of Boston and Chelsea, protecting communities from the harms of Defendants' gas leaks, and advocating for long-term solutions to the climate crisis.

173. Plaintiff organizations allocate resources to researching and mitigating the harms of Defendants' gas leaks, including the risks of explosions and fires, as well as the destruction of public shade trees that worsens the heat island effect.

174. Plaintiffs suffer special injuries from the imminent risk of explosion and fire from Defendants' gas leaks that are different from those suffered by the rest of the public: 1) Plaintiffs live, work, and recreate near Defendants' gas leaks that pose an imminent explosion and fire risk, and 2) Plaintiffs allocate resources to spread awareness about the harms of Defendants' gas leaks, testify in proceedings related to natural gas infrastructure, and research and mitigate natural gas pollution.

175. Plaintiffs suffer special injuries from damaged and dead trees that are of a different kind from those suffered by the rest of the public: 1) Plaintiffs live, work, and recreate near the damaged and dead trees, and 2) Plaintiffs allocate resources to protect and plant trees, and research and mitigate the heat island effect.

STATUTORY AND REGULATORY BACKGROUND

The Resource Conservation and Recovery Act (“RCRA”)

176. The purpose of RCRA is to “reduce[] or eliminate[] . . . the generation of hazardous waste . . . as expeditiously as possible” and to “minimize the present and future threat to human health and the environment” from hazardous waste that is nevertheless generated. 42 U.S.C. § 6902(b).

177. In enacting RCRA, Congress found that there is a need to “develop alternative energy sources . . . to reduce our dependence on . . . natural gas.” *Id.* § 6901(d)(2).

178. RCRA defines “hazardous waste” as

a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may--

(A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or

(B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.

Id. § 6903(5).

179. RCRA defines “solid waste” as

any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges which are point sources subject to permits under section 1342 of Title 33, or source, special

nuclear, or byproduct material as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923).

Id. § 6903(27).

180. RCR defines “a discarded material” as any material that is “abandoned” or “considered inherently waste-like.” 40 C.F.R. § 261.2(a)(2)(i). The definition of “abandoned” materials includes materials that are “disposed of.” *Id.* § 261.2(b)(1).

181. RCRA defines “disposal” as

the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous waste into or on any land or water so that such solid waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including ground water.

42 U.S.C. § 6903(3).

182. Under RCRA, solid waste is “hazardous” if it is ignitable (flammable). 40 C.F.R. §§ 261.20, 261.21; *see* 42 U.S.C. §§ 6903(5), 6921.

183. Natural gas consists of chemicals and compounds that are highly ignitable (flammable), including methane, ethane, propane, pentane, and hexanes plus. 40 C.F.R. §§ 261.20, 261.21; 49 C.F.R. § 173.115.

184. RCRA prohibits “any solid waste management practice or disposal of solid waste or hazardous waste which constitutes the open dumping of solid waste or hazardous waste.” 42 U.S.C. § 6945(a).

185. RCRA prohibits the contribution “to the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste which may present an imminent and substantial endangerment to health or the environment.” *Id.* § 6972(a)(1)(B).

186. RCRA defines “open dumping” as “any facility or site where solid waste is disposed of which is not a sanitary landfill which meets the criteria promulgated under section 6944 of this title and which is not a facility for disposal of hazardous waste.” *Id.* § 6903(14).

187. In enacting RCRA, Congress found that “open dumping is particularly harmful to health.” *Id.* § 6901.

188. Pursuant to 42 U.S.C. § 6944, EPA created criteria for determining when the disposal of solid or hazardous waste constitutes open dumping in 40 C.F.R. Part 257.

189. Facilities or practices “failing to satisfy any of the criteria in §§ 257.1 through 257.4 or §§ 257.5 through 257.30 or §§ 257.50 through 257.107 are considered open dumps, which are prohibited under section 4005 [42 U.S.C. § 6945] of the Act.” 40 C.F.R. § 257.1(a)(1).

190. RCRA defines “facility” as “all contiguous land and structures, other appurtenances, and improvements on the land used for the disposal of solid waste.” *Id.* § 257.2.

191. RCRA defines “practice” as “the act of disposal of solid waste.” *Id.*

192. The open dumping criterion in 40 C.F.R. § 257.3-8(a) provides that the “concentration of explosive gases generated by the facility or practice shall not exceed . . . [t]wenty-five percent (25%) of the lower explosive limit for the gases in facility structures.” *Id.* § 257.3-8(a).

193. “Explosive gas” is defined as methane. *Id.* § 257.3-8(e)(3).

194. “Facility structures” are defined as “any buildings and sheds or utility or drainage lines on the facility.” *Id.* § 257.3-8(e)(4).

195. Defendants’ pipelines are facility structures.

196. The open dumping criterion in 40 C.F.R. § 257.3-8(b) provides that a “facility or practice shall not pose a hazard to the safety of persons or property from fires.” *Id.* § 257.3-8(b).

197. RCRA authorizes any person to “commence a civil action” against any person “who is alleged to be in violation of any permit, standard, regulation, condition, requirement, prohibition, or order ” or against any person “who has contributed or who is contributing to the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste

which may present an imminent and substantial endangerment to health or the environment.” 42 U.S.C. § 6972(a)(1).

198. RCRA defines “person” as “an individual, trust, firm, joint stock company, corporation (including a government corporation), partnership, association, State, municipality, commission, political subdivision of a State, or any interstate body and shall include each department, agency, and instrumentality of the United States.” *Id.* § 6903(15).

199. RCRA does not “restrict any right which any person (or class of persons) may have under any statute or common law to seek enforcement of any standard or requirement relating to the management of solid waste or hazardous waste, or to seek any other relief.” *Id.* § 6972(f).

200. The Court may “award costs of litigation (including reasonable attorney and expert witness fees) to the prevailing or substantially prevailing party, whenever [this] [C]ourt determines such an award is appropriate.” *Id.* § 6972(e).

201. Each day Defendants violate RCRA constitutes a separate RCRA violation and subjects Defendants to a civil penalty of up to \$90,702 per violation per day. 42 U.S.C. § 6972(a); 40 C.F.R. §§ 19.1–19.4.

The Pipeline Safety Act (“PSA”)

202. The purpose of the PSA is to “provide adequate protection against risks to life and property posed by pipeline transportation and pipeline facilities” and to “protect the environment.” 49 U.S.C. § 60102; *see* 220 CMR 114.01.

203. Standards under the PSA are designed to ensure human safety and to protect the environment. 49 U.S.C. § 60102(b).

204. The PSA prescribes, *inter alia*, minimum safety standards for pipeline operators for gas pipeline leak detection and repair. *Id.* § 60102(q).

205. Violations of certain “safety standard[s] or practice[s] of a State” constitute a violation of the PSA. *Id.* § 60121(c).

206. The Massachusetts DPU has authority to regulate intrastate pipelines under the PSA. *Id.* § 60105; M.G.L. ch. 164, § 105A.

207. There is no process for public participation before, during, or after DPU finalizes an enforcement order under the PSA.

208. Under the PSA, “[n]o person may operate a segment of pipeline” out of compliance with the PSA. 49 C.F.R. § 192.703.

209. The PSA states that “[h]azardous leaks must be repaired promptly.” *Id.*

210. Promptly means “without delay; very quickly or immediately.” *Promptly*, MERRIAM-WEBSTER DICTIONARY.

211. “Hazardous leak” is defined as a “leak that represents an existing or probable hazard to persons or property and requires immediate repair or continuous action until the conditions are no longer hazardous.” 49 C.F.R. § 192.1001.

212. Gas companies must “take steps to minimize the danger of accidental ignition of gas in any structure or area where the presence of gas constitutes a hazard of fire or explosion.” *Id.* § 192.751.

213. Each gas company assesses a “grade” to all reported natural gas leaks. 220 CMR 114.03.

214. Grades are based on the pressure of the pipeline, the size of the leak and its migration pattern, the population density near the leak, and the pipeline’s proximity to buildings and structures. *Id.* 114.04(2).

215. A “grade” is a classification for natural gas leaks that depends on how dangerous the leak is to persons or property.⁶⁰

216. A gas leak can be graded as “Grade 1,” “Grade 2,” or “Grade 3.” *Id.* 114.04(3)

217. Massachusetts prescribes a time frame for the repair of leaks according to the leak’s “grade.” *Id.* 114.04.

218. A Grade 1 leak “represents an existing or probable hazard to persons or property. Grade 1 leaks require the immediate commencement of repair-and continuous action until the conditions are no longer hazardous, the source of the leak is eliminated, and permanent repairs have been completed.” *Id.* 114.04(3)(a).

219. Hazardous leaks are Grade 1 leaks. 220 CMR 114.04(3)(a).

220. Any of the following are considered Grade 1 leaks:

- a. Any leak that, in the judgment of operating personnel at the scene, constitutes an immediate hazard;
- b. Escaping gas that is ignited;
- c. Any indication of gas which has migrated into or under a building, or into a tunnel;
- d. Any indication of gas which has migrated to an outside wall of a building where gas would likely migrate or into a tunnel;
- e. Any reading of 80% of the lower explosive limit (“LEL”), or greater, in a confined space;

⁶⁰ D.P.U. Dkt. No. 23-GLR-01, Report to the Legislature on the Prevalence of Natural Gas Leaks in the Natural Gas System, at 5 (Dec. 31, 2023), <https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/18749314>.

f. Any reading of 80% LEL, or greater, in small substructures (other than gas-associated substructures) from which gas would likely migrate to the outside wall of a building; or

g. Any leak that can be seen, heard, or felt, and which is in a location that may endanger the general public or property.⁶¹

221. A Grade 2 leak “is recognized as nonhazardous to persons or property at the time of detection,” but requires “scheduled repair based on probable future hazard.” *Id.* 114.04(3)(b).

222. A Grade 2 leak must be repaired or the pipeline must be replaced within “12 months from the date the leak was classified.” *Id.*

223. A Grade 3 leak “is recognized as nonhazardous to persons or property at the time of detection and can be reasonably expected to remain non-hazardous.” *Id.* 114.04(3)(c).

224. A Grade 3 leak that has a significant environmental impact must be repaired within the prescribed time. *Id.* 114.07.

225. A Grade 3 leak has a significant environmental impact (“G3SEI”) if: 1) the highest barhole (or in-ground) reading detects 50% or higher (the “Barhole method”), or 2) the leak extent is 2,000 square feet or greater (the “leak extent method”). *Id.* 114.07(1).

226. Gas companies are allowed to redesignate a G3SEI leak “initially designated as [G3SEI] by the Barhole method”—but not by the leak extent method—“to a standard Grade 3 leak if a subsequent annual survey measurement indicates that the leak no longer qualifies as environmentally significant.” *Id.* 114.07(4).

227. G3SEI leaks are known as “super-emitters” because they disproportionately emit methane.

⁶¹ 88 Fed. Reg. 31890, 31917 (discussing the Gas Piping Technology Committee (“GPTC”)’s Guide for Gas Transmission and Distribution Piping Systems).

228. In the Greater Boston area, a leak study found that just seven out of 100 gas leaks were responsible for half of the total methane emissions from those 100 leaks.⁶²

229. G3SEI (super-emitter) leaks designated by the leak extent method with a leak extent between 2,000 and 10,000 square feet must be eliminated within two years of initial designation, or within three years if the pipeline on which the leak is located is designated for pipeline replacement within five years. *Id.* 114.07(2)(a)(2).

230. G3SEI (super-emitter) leaks designated by the leak extent method with a leak extent greater than 10,000 square feet must be eliminated within 12 months of initial designation, or within two years if the pipeline on which the leak is located is designated for pipeline replacement within three years. *Id.* 114.07(2)(a)(3).

231. The PSA requires that each gas company must report on the following information every calendar year:

- a. “the location of each Grade 1, Grade 2, and Grade 3 leak existing as of the date of December 31st;
- b. the date each Grade 1, Grade 2, and Grade 3 leak was classified;
- c. the dates of repairs performed on each Grade 1, Grade 2, and Grade 3 leak;
- d. leaks carried forward from previous calendar year;
- e. new leaks identified by classification during the calendar year;
- f. each leak repaired during the calendar year;
- g. each leak eliminated during the calendar year;

⁶² Margaret F. Hendrick et al., *Fugitive Methane Emissions from Leak-Prone Natural Gas Distribution Infrastructure in Urban Environments*, 213 ENV'T POLLUTION 710 (2016), <https://doi.org/10.1016/j.envpol.2016.01.094>; *Fixing Super-Emitting Gas Leaks: Shared Action Plan Update*, HEET (Nov. 23, 2022), <https://www.heetma.org/blog-items/fixing-super-emitting-gas-leaks-shared-action-plan-update>.

- h. leaks pending at end of calendar year;
- i. any change in leak classification during the calendar year;
- j. whether each Grade 3 leak is designated as environmentally significant;
- k. the date of designation as environmentally significant, as applicable; and
- l. the Leak Extent or Barhole reading for environmentally significant Grade 3 leaks, as applicable.” *Id.* 114.08(1).

232. The PSA requires that each gas company must report on the following information every calendar quarter:

- a. “leaks carried forward from previous quarter;
- b. new leaks identified by classification during the quarter;
- c. each leak repaired during the quarter;
- d. each leak eliminated by replacement during the quarter;
- e. leaks pending at end of quarter;
- f. any change in leak classification during the quarter;
- g. whether each Grade 3 leak is designated as environmentally significant;
- h. the date of designation as environmentally significant, as applicable; and
- i. the Leak Extent or Barhole reading for environmentally significant Grade 3 leaks, as applicable.” *Id.* 114.08(2).

233. The PSA authorizes any person to “bring a civil action” against another person for violating the statute, which includes certain state standards. 49 U.S.C. § 60121(a).

234. A remedy under the PSA “is in addition to any other remedies provided by law. This section does not restrict a right to relief that a person or a class of persons may have under another law or at common law.” *Id.* § 60121(d).

235. Each day Defendants violate the PSA constitutes a separate PSA violation and subjects Defendants to a civil penalty of up to can result in a civil penalty of \$266,015. *Id.* §§ 60122(a), 60118(a); 49 C.F.R. § 190.223.

The Massachusetts Public Shade Tree Law

236. The Massachusetts Public Shade Tree Law protects public shade trees, which are all trees “within a public way or on the boundaries thereof.” M.G.L. ch. 87, § 1.

237. The Massachusetts Public Shade Tree Law authorizes persons to seek damages for their “interest” in a public shade tree from anyone who “negligently or wilfully injures, defaces or destroys such a shrub, plant, tree or fixture.” *Id.* § 12.

The Massachusetts Environmental Citizen Suit Statute

238. The Massachusetts Environmental Citizen Suit Statute authorizes any ten Massachusetts-domiciled persons to seek an injunction against any person who is “causing or about to cause . . . damage to the environment” if such damage “constitutes a violation of a statute, ordinance, by-law or regulation the major purpose of which is to prevent or minimize damage to the environment.” M.G.L. ch. 214, § 7A.

239. “Damage to the environment” means

any destruction, damage or impairment, actual or probable, to any of the natural resources of the commonwealth, whether caused by the defendant alone or by the defendant and others acting jointly or severally. Damage to the environment shall include, but not be limited to, air pollution, water pollution, improper sewage disposal, pesticide pollution, excessive noise, improper operation of dumping grounds, impairment and eutrophication of rivers, streams, flood plains, lakes, ponds or other water resources, destruction of seashores, dunes, wetlands, open spaces, natural areas, parks or historic districts or sites.

Id.

240. Public shade trees throughout the affected neighborhoods are natural resources of the Commonwealth.

241. Injury or death of a public shade tree constitutes damage to the environment.

242. Nothing in the Massachusetts Environmental Citizen Suit Statute “shall be construed so as to impair, derogate or diminish any common law or statutory right or remedy which may be available to any person, but the cause of action herein authorized shall be in addition to any such right or remedy.” *Id.*

CLAIMS FOR RELIEF

243. Plaintiffs incorporate the allegations in the above paragraphs into each count below as though fully set forth herein.

244. In light of Defendants’ history of violations, and absent court-ordered relief, Defendants will continue to violate RCRA, the PSA, the Massachusetts Public Shade Tree Law, and the Massachusetts Environmental Citizen Suit Statute, and committing negligence and nuisance.

245. Defendants’ violations of federal and state law have harmed, are harming, and will continue to harm Plaintiffs.

246. Upon information and belief, additional information from Defendants and other sources not yet publicly available will reveal additional violations and will reveal additional information about the violations described.

247. The alleged violations documented by Plaintiffs thus far are representative of Defendants’ normal practice and operations and therefore evidence a broader pattern and practice of Defendants’ violations.

COUNT 1: VIOLATION OF RCRA—IMMINENT AND SUBSTANTIAL ENDANGERMENT TO HUMAN HEALTH AND THE ENVIRONMENT

248. Defendants dispose of solid and hazardous waste by operating and maintaining leaking gas pipelines in the affected neighborhoods, which contain or are composed of hazardous waste

constituents and toxic chemicals, including but not limited to: methane, ethane, hexane, benzene, toluene, heptane, and cyclohexane.

249. Through their acts and omissions, Defendants have contributed to and are contributing to the “past or present ... disposal of ... solid or hazardous waste which may present an imminent and substantial endangerment to human health or the environment,” in violation of RCRA. 42 U.S.C. § 6972(a)(1)(B).

250. Defendants’ gas leak reports indicate that at least 17 of their hazardous Grade 1 leaks in the affected neighborhoods continue to leak as of September 30, 2024, that pose an imminent and substantial endangerment to health or the environment, as detailed in Exhibit 6.

251. One of Defendants’ hazardous Grade 1 leaks in Chinatown has been leaking for more than three years, which Defendants deleted from their gas leak reports despite failing to repair the leak.

252. On average, Defendants identify 146 new hazardous Grade 1 leaks each quarter.

253. Over the course of seven days, Plaintiffs’ investigators recorded 15 of Defendants’ gas leaks in the affected neighborhoods that have contributed to or are contributing to an imminent and substantial endangerment to health or the environment, as detailed in Table 1 below.

Table 1. Imminent and Substantial Endangerment to Health or the Environment

<u>Paragraph No.</u>	<u>Date</u>	<u>Methane Concentration</u>	<u>Location of Gas</u>	<u>Type of Hazardous Leak (Grade 1) under GPTC Guide</u>
254.	7/24/2023	6%	Manhole at 1916 Dorchester Ave., Boston, MA 02124 (near Ashmont Station)	Any reading of 80% of the LEL (4%), or greater, in a confined space
255.	7/24/2023	5%	Manhole at the intersection of Commonwealth Ave. and Arlington St., Boston, MA 02116	Any reading of 80% of the LEL (4%), or greater, in a confined space
256.	11/27/2023	9%	Outside wall of 39 Heard St., Chelsea, MA 02150	Any indication of gas which has migrated into or under a building, or into a tunnel;

<u>Paragraph No.</u>	<u>Date</u>	<u>Methane Concentration</u>	<u>Location of Gas</u>	<u>Type of Hazardous Leak (Grade 1) under GPTC Guide</u>
				Any indication of gas which has migrated to an outside wall of a building where gas would likely migrate or into a tunnel
257.	11/27/2023	0.25%	Outside wall of 452 Bennington St., East Boston, MA 02128	Any indication of gas which has migrated into or under a building, or into a tunnel; Any indication of gas which has migrated to an outside wall of a building where gas would likely migrate or into a tunnel
258.	11/27/2023	5%	Manhole at 451 Bennington St., East Boston, MA 02128	Any reading of 80% of the LEL (4%), or greater, in a confined space
259.	11/27/2023	5%	Manhole at 2909 Washington St., Roxbury, MA 02119	Any reading of 80% of the LEL (4%), or greater, in a confined space
260.	11/27/2023	7%	Manhole at 4109 Washington St., Roxbury, MA 02119	Any reading of 80% of the LEL (4%), or greater, in a confined space
261.	11/27/2023	20%	Manhole at 4109 Washington St., Roxbury, MA 02119 (separate from above)	Any reading of 80% of the LEL (4%), or greater, in a confined space
262.	11/28/2023	4%	Manhole at 4499 Washington St., Roslindale, MA 02131	Any reading of 80% of the LEL (4%), or greater, in a confined space
263.	11/28/2023	11%	Manhole at the intersection of Adams St. and Whitten St., Dorchester, MA 02122	Any reading of 80% of the LEL (4%), or greater, in a confined space
264.	11/30/2023	2.7%	Outside wall of Massachusetts Government Offices, 100 Cambridge St., Boston, MA 02114	Any indication of gas which has migrated into or under a building, or into a tunnel; Any indication of gas which has migrated to an outside wall of a building where gas would likely migrate or into a tunnel
265.	11/30/2023	1%	Outside wall of 215 Neponset Ave., Dorchester, MA 02122 (Boutwell St. side)	Any indication of gas which has migrated into or under a building, or into a tunnel; Any indication of gas which has migrated to an outside wall of a building where gas

<u>Paragraph No.</u>	<u>Date</u>	<u>Methane Concentration</u>	<u>Location of Gas</u>	<u>Type of Hazardous Leak (Grade 1) under GPTC Guide</u>
				would likely migrate or into a tunnel
266.	6/1/2024	4%	Outside wall of Melvin H. King South Academy, (McKinley Elementary School), 90 Warren Ave., Boston, MA 02116 (Dartmouth St. side)	Any indication of gas which has migrated into or under a building, or into a tunnel; Any indication of gas which has migrated to an outside wall of a building where gas would likely migrate or into a tunnel
267.	7/23/2024	10%	Outside wall of Liberty Mutual Tower, 157 Berkeley St., (145 Columbus Ave.), Boston, MA 02116	Any indication of gas which has migrated into or under a building, or into a tunnel; Any indication of gas which has migrated to an outside wall of a building where gas would likely migrate or into a tunnel
268.	7/24/2024	40%	Outside wall of 1562 Dorchester Ave., Dorchester, MA 02122	Any indication of gas which has migrated into or under a building, or into a tunnel; Any indication of gas which has migrated to an outside wall of a building where gas would likely migrate or into a tunnel

269. Each day that Defendants have contributed to and will continue to contribute to an imminent and substantial endangerment to health or the environment constitutes a separate and distinct violation of RCRA. *Id.* § 6972(a).

COUNT 2: VIOLATION OF RCRA—OPEN DUMPING BY EXCEEDING LIMITATION ON METHANE AT FACILITY STRUCTURES

270. Defendants dispose of solid and hazardous waste by operating and maintaining leaking gas pipelines in the affected neighborhoods, which contain or are composed of hazardous waste constituents and toxic chemicals, including but not limited to: methane, ethane, hexane, benzene, toluene, heptane, and cyclohexane.

271. RCRA prohibits open dumping, which prohibits explosive gases generated by Defendants' facility or practice from exceeding 25% of the lower explosive limit for the gas in facility structures. 40 C.F.R. § 257.3-8(a). The lower explosive limit of methane is 5%; accordingly, 25% of 5% is 1.25%.

272. Through their acts and omissions, Defendants have open dumped and are open dumping hazardous waste by exceeding the methane limitation at facility structures in violation of RCRA. 42 U.S.C. § 6972(a)(1)(A).

273. Over just seven days, Plaintiffs' investigators recorded 13 of Defendants' gas leaks that exceeded the 1.25% limitation on the methane concentration at facility structures in the affected neighborhoods, as high as 3,100 times higher than the limit, as detailed in Table 2.

Table 2. Open Dumping: Exceedance of Methane Limit

<u>Paragraph No.</u>	<u>Date</u>	<u>Methane Concentration</u>	<u>Location of Gas</u>	<u>Percent Exceedance</u>
274.	7/24/2023	6%	Manhole at 1916 Dorchester Ave., Boston, MA 02124 (near Ashmont Station)	380%
275.	7/24/2023	5%	Manhole at the intersection of Commonwealth Ave. and Arlington St., Boston, MA 02116	300%
276.	11/27/2023	9%	Outside wall of 39 Heard St., Chelsea, MA 02150	620%
277.	11/27/2023	5%	Manhole at 451 Bennington St., East Boston, MA 02128	300%
278.	11/27/2023	5%	Manhole at 2909 Washington St., Roxbury, MA 2119	300%
279.	11/27/2023	7%	Manhole at 4109 Washington St., Roxbury, MA 02119	460%
280.	11/27/2023	20%	Manhole at 4109 Washington St., Roxbury, MA 02119 (separate from above)	1500%
281.	11/28/2023	4%	Manhole at 4499 Washington St., Roslindale, MA 02131	220%
282.	11/28/2023	11%	Manhole at the intersection of Adams St. and Whitten St., Dorchester, MA 02122	780%

<u>Paragraph No.</u>	<u>Date</u>	<u>Methane Concentration</u>	<u>Location of Gas</u>	<u>Percent Exceedance</u>
283.	11/30/2023	2.7%	Outside wall of Massachusetts Government Offices, 100 Cambridge St., Boston, MA 02114	116%
284.	6/1/2024	4%	Outside wall of Melvin H. King South Academy, (McKinley Elementary School), 90 Warren Ave., Boston, MA 02116 (Dartmouth St. side)	220%
285.	7/23/2024	10%	Outside wall of Liberty Mutual Tower, 157 Berkeley St., (145 Columbus Ave.), Boston, MA 02116	700%
286.	7/24/2024	40%	Outside wall of 1562 Dorchester Ave., Dorchester, MA 02122	3100%

287. Each day that Defendants have open dumped or will continue to open dump by exceeding the methane limitation in facility structures is a separate and distinct violation of RCRA. *Id.* § 6972(a).

COUNT 3: VIOLATION OF RCRA—OPEN DUMPING BY POSING A SAFETY HAZARD TO PERSONS AND PROPERTY FROM FIRES

288. Defendants dispose of solid and hazardous waste by operating and maintaining leaking gas pipelines in the affected neighborhoods, which contain or are composed of hazardous waste constituents and toxic chemicals, including but not limited to: methane, ethane, hexane, benzene, toluene, heptane, and cyclohexane.

289. RCRA prohibits open dumping, which prohibits a facility or practice from “pos[ing] a hazard to the safety of persons or property from fires.” 40 C.F.R. § 257.3-8(b).

290. Through their acts and omissions, Defendants have open dumped and are open dumping hazardous waste by posing a safety hazard to persons and property from fires in violation of RCRA. 42 U.S.C. § 6972(a)(1)(A).

291. In the affected neighborhoods, there are at least 32 instances of open dumping by posing a fire hazard to persons and property, as detailed in Table 1 and Exhibit 6.

292. Each day that Defendants have open dumped or will continue to open dump by posing a safety hazard to persons and property from fires constitutes a separate and distinct violation of RCRA. 42 U.S.C. § 6972(a).

COUNT 4: VIOLATION OF PSA—FAILURE TO PROMPTLY REPAIR HAZARDOUS LEAKS

293. Defendants own and operate pipelines for the distribution of natural gas in the affected neighborhoods.

294. Since at least 2019, Defendants failed to promptly repair at least 898 hazardous leaks in the affected neighborhoods, as detailed in Exhibit 6.

295. Defendants' gas leak reports show that Defendants allow hazardous leaks to continue leaking for unlawfully long periods of time, including as much as three years.

296. Each day that Defendants fail to promptly repair a hazardous leak constitutes a separate and distinct violation of the PSA.

COUNT 5: VIOLATION OF PSA—FAILURE TO IMMEDIATELY COMMENCE REPAIR AND CONTINUOUS ACTION TO ELIMINATE HAZARDOUS GRADE 1 LEAKS

297. Defendants own and operate pipelines for the distribution of natural gas in the affected neighborhoods.

298. Since at least 2019, Defendants failed to immediately commence “repair-and continuous action until the conditions are no longer hazardous, the source of the leak is eliminated, and permanent repairs have been completed” for at least 898 hazardous Grade 1 leaks in the affected neighborhoods, as detailed in Exhibit 6. 220 CMR 114.04(3)(a).

299. Defendants' gas leak reports show that Defendants allow hazardous leaks to continue leaking for unlawfully long periods of time, including as much as three years.

300. Each day that Defendants failed to immediately commence “repair-and continuous action until the conditions are no longer hazardous, the source of the leak is eliminated, and permanent repairs have been completed” for hazardous Grade 1 leaks constitutes a separate and distinct violation of the PSA.

COUNT 6: VIOLATION OF PSA—FAILURE TO TIMELY REPAIR GRADE 2 LEAKS

301. Defendants own and operate pipelines for the distribution of natural gas in the affected neighborhoods.

302. The PSA requires Defendants to repair Grade 2 leaks within 12 months of the leak being classified. 220 CMR 114.04(3)(b).

303. Since at least 2019, Defendants failed to repair at least 302 Grade 2 leaks within 12 months in the affected neighborhoods, as detailed in Exhibit 7.

304. Each day that a Grade 2 leak is not repaired after 12 months constitutes a separate and distinct violation of the PSA.

COUNT 7: VIOLATION OF PSA—FAILURE TO TIMELY ELIMINATE SUPER-EMITTER GAS LEAKS

305. Defendants own and operate pipelines for the distribution of natural gas in the affected neighborhoods.

306. The PSA requires Defendants to eliminate super-emitter gas leaks in prescribed timeframes. 220 CMR 114.07.

307. Since at least 2019, Defendants failed to timely eliminate at least 62 super-emitter (G3SEI) gas leaks in the affected neighborhoods, as detailed in Exhibit 8, including by:

- a. Failing to designate leaks as super-emitters when the leak meets the super-emitter leak threshold; or

b. Improper downgrading of super-emitter leaks to a standard Grade 3 leak when using the leak extent method for designation.

308. Each day that Defendants fail to timely eliminate a super-emitter gas leak constitutes a separate and distinct violation of the PSA.

COUNT 8: VIOLATION OF PSA—FAILURE TO COMPLY WITH MONITORING AND REPORTING REQUIREMENTS

309. Defendants own and operate pipelines for the distribution of natural gas in the affected neighborhoods.

310. The PSA requires Defendants to continue reporting on gas leaks until eliminated. 220 CMR 114.08.

311. Since at least 2019, Defendants have deleted at least 23 active gas leaks in the affected neighborhoods from their gas leak reports, which Defendants were required to continue reporting as leaks “carried forward from previous quarter” and as “leaks pending at end of quarter,” as detailed in Exhibit 9.

312. The 23 deleted leaks in Exhibit 9 are eight active hazardous Grade 1 leaks and 15 active Grade 2 leaks.

313. The 23 deleted leaks in Exhibit 9 continue to leak and pose safety and environmental risks.

314. In 2014 and 2015, MIT researchers found that Defendants deleted 17% of the active gas leaks from their gas leak reports.⁶³

315. Each day that Defendants fail to report on or monitor a leak as required by the PSA constitutes a separate and distinct violation of the PSA.

⁶³ Michael Webber & Al Carter, *Lost Leaks*, MASS. INST. TECH., <http://lostleaks.csail.mit.edu/> (last visited July 15, 2024).

**COUNT 9: VIOLATION OF MASSACHUSETTS PUBLIC SHADE TREE LAW—
NEGLIGENT INJURY**

316. The Massachusetts Public Shade Tree Law authorizes persons to seek damages for their “interest” in a public shade tree from anyone who “negligently or wilfully injures, defaces or destroys such a shrub, plant, tree or fixture.” M.G.L. ch. 87, § 12.

317. In the affected neighborhoods, Defendants’ gas leaks have negligently injured or killed at least 210 public shade trees, as detailed in Exhibit 10.

318. One tree pit contained 90% methane and only 1% oxygen in the soil.

319. All 210 trees are damaged or dead.

320. The damaged and dead trees are in close proximity to Defendants’ gas leaks.

321. Defendants admit that “dead vegetation” is a sign of a gas leak.

322. Defendants have a duty to exercise reasonable care in maintaining their gas pipelines and responding to gas leaks in a way that does not harm public shade trees.

323. Defendants know or should have known that their pipelines are leaking methane that injures and kills public shade trees in the affected neighborhoods.

324. By failing to exercise reasonable care to properly maintain their gas pipelines and eliminate gas leaks that injure and kill public shade trees, Defendants breached their duty of care to Plaintiffs.

325. As a direct and proximate result of Defendants’ negligence, methane from Defendants’ gas leaks has infiltrated the soil of at least 210 public shade trees, injuring or killing at least 210 public shade trees, as detailed in Exhibit 10.

**COUNT 10: VIOLATION OF MASSACHUSETTS ENVIRONMENTAL CITIZEN SUIT
STATUTE—DAMAGE TO THE ENVIRONMENT**

326. Plaintiffs constitute a group of 14 citizens of the Commonwealth.

327. The Massachusetts Environmental Citizen Suit Statute authorizes a group of ten or more plaintiffs to seek injunctive or declaratory relief to prevent or enjoin damage to the environment where that damage would be or is in violation of a statute, ordinance, by-law, or regulation, the major purpose of which is to prevent or minimize damage to the environment. M.G.L. ch. 214. § 7A.

328. In the affected neighborhoods, methane from Defendants' gas leaks has infiltrated the soil of at least 210 public shade trees, damaging or killing at least 210 public shade trees, as detailed in Exhibit 10.

329. One tree pit contained 90% methane and only 1% oxygen in the soil.

330. All 210 trees are damaged or dead.

331. The damaged and dead trees are in close proximity to Defendants' gas leaks.

332. Defendants admit that "dead vegetation" is a sign of a gas leak.

333. Defendants have violated, are violating, and will continue to violate RCRA, the PSA, and the Massachusetts Public Shade Tree Law, the major purposes of which are to prevent or minimize damage to the environment.

334. Each instance of Defendants' gas leaks that causes damage or death to a tree constitutes damage to the environment.

COUNT 11: NEGLIGENCE

335. Defendants have a duty to exercise reasonable care in maintaining their gas pipelines and responding to gas leaks in a way that does not harm public shade trees.

336. Defendants know or should have known that their pipelines are leaking methane that damages and kills public shade trees in the affected neighborhoods.

337. By failing to exercise reasonable care to properly maintain their gas pipelines and eliminate gas leaks that damage and kill public shade trees, Defendants breached their duty of care to Plaintiffs.

338. As a direct and proximate result of Defendants' negligence, in the affected neighborhoods, methane from Defendants' gas leaks has infiltrated the soil of at least 210 public shade trees, damaging or killing at least 210 public shade trees, as detailed in Exhibit 10.

339. One tree pit contained 90% methane and only 1% oxygen in the soil.

340. All 210 trees are damaged or dead.

341. The damaged and dead trees are in close proximity to Defendants' gas leaks.

342. Defendants admit that "dead vegetation" is a sign of a gas leak.

COUNT 12: PUBLIC NUISANCE—DAMAGE AND DEATH OF PUBLIC SHADE TREES

343. Massachusetts law prohibits Defendants from causing or participating in the creation of a public nuisance, defined as an unreasonable interference with a right common to the public.

344. Through their acts and omissions, Defendants have and will continue to cause and contribute to damaging and killing public shade trees by failing to maintain their gas pipelines, leading to an unreasonable interference with a right common to the public and the creation of a public nuisance.

345. As a direct and proximate result of Defendants' nuisance, in the affected neighborhoods, methane from Defendants' gas leaks has infiltrated the soil of at least 210 public shade trees, damaging or killing at least 210 public shade trees, as detailed in Exhibit 10.

346. The damaged and dead trees caused and contributed to by Defendants have substantially and unreasonably interfered with rights general to the public, including public health, public

safety, public peace, public comfort, and public convenience. These interferences with public rights include, *inter alia*:

- a. Damage to and death of public shade trees that provide aesthetic value;
- b. Damage to and death of public shade trees that provide recreational value;
- c. Damage to and death of public shade trees that provide health value, e.g., mitigating the effects of extreme heat and the heat island effect, which cause detrimental health effects and loss of productivity; reducing blood pressure and stress; and improving mental health;
- d. Damage to and death of public shade trees that provide ecosystem services, e.g., protecting against flooding; filtering air pollution; and providing habitat for wildlife.

347. The gravity of the human health and environmental risks created by Defendants' conduct far outweighs any social benefit from Defendants' failure to maintain their gas pipelines.

COUNT 13: PUBLIC NUISANCE—IMMINENT EXPLOSION AND FIRE RISKS

348. Massachusetts law prohibits Defendants from causing or participating in the creation of a public nuisance, defined as an unreasonable interference with a right common to the public.

349. Through their acts and omissions, Defendants have caused and will continue to cause gas leaks that pose imminent risks of explosion and fire by failing to maintain their gas pipelines, leading to an unreasonable interference with a right common to the public and the creation of a public nuisance.

350. As a direct and proximate result of Defendants' nuisance, at least 32 of Defendants' gas leaks in the affected neighborhoods pose an imminent risk of explosion and fire, as detailed in Table 1 and Exhibit 6.

351. One of these hazardous Grade 1 leaks in Chinatown has been leaking for more than three years, which Defendants deleted from their gas leak reports despite failing to repair the leak.

352. On average, Defendants identify 146 new hazardous Grade 1 leaks each quarter.

353. The imminent risk of explosion and fire that Defendants caused has substantially and unreasonably interfered with rights general to the public, including public health, public safety, public peace, public comfort, and public convenience. These interferences with public rights include, *inter alia*:

- a. Death of or severe injury to people;
- b. Destruction of homes and property;
- c. Environmental degradation;
- d. Increased costs to communities, municipalities, and emergency responders to respond to explosions and fires; and
- e. Declining integrity and safety of the natural gas infrastructure.

354. The gravity of the human health and safety risks created by Defendants' conduct far outweighs any social benefit from Defendants' failure to maintain their gas pipelines.

RELIEF REQUESTED

WHEREFORE, Plaintiffs pray that this Court enter judgment against Defendants on all counts and grant the following relief:

- A. Declare that Defendants are in violation of RCRA; the PSA, and the Massachusetts Public Shade Tree Law, and that Defendants have caused and are causing damage to the environment under the Massachusetts Environmental Citizen Suit Statute;
- B. Order Defendants to pay civil penalties of \$90,702 per day per violation for RCRA that occurred after November 2, 2015, where penalties are assessed on or after December 27, 2023, 42 U.S.C. §§ 6928(g), 6972(a); 40 C.F.R. § 19.4;
- C. Order Defendants to pay compensatory damages under the Massachusetts Public Shade Tree Law, jointly and severally, in an amount according to proof;

- D. After trial, enter appropriate relief enjoining Defendants from distributing natural gas via pipelines permanently in the affected neighborhoods unless and until the Defendants implement procedures—to be demonstrated at trial—that would reduce the scope of gas leaks;
- E. Order Defendants to develop measures to remedy, mitigate, or offset the harm to public health and the environment caused by the violations alleged herein;
- F. Order Defendants to pay compensatory damages for harms caused by their negligence, jointly and severally, in an amount according to proof;
- G. Order Defendants to pay compensatory damages for harms caused by their nuisance, jointly and severally, in an amount according to proof;
- H. Award costs and fees, including reasonable litigation costs (including attorneys' fees) to the fullest extent permitted by law, including as authorized under RCRA, 42 U.S.C. § 6972(e); the PSA, 49 U.S.C. § 60121(b); and the Massachusetts Environmental Citizen Suit Statute, M.G.L. ch. 214, § 7A; and
- I. Grant such other relief as the Court deems just and proper.

Dated: November 12, 2024

Respectfully submitted,

/s/ Ameya Gehi

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CERTIFICATE OF SERVICE

I hereby certify that on November 12, 2024, this document was filed through the Court's electronic filing system (CM/ECF), by which means a copy of the filing was sent electronically to all parties registered with the CM/ECF system.

/s/ Ameya Gehi
Ameya Gehi