

Michigan Law Review

Volume 121 | Issue 2

2022

The Particle Problem: Using RCRA Citizen Suits to Fill Gaps in the Clean Air Act

Kurt Wohlers

University of Michigan Law School

Follow this and additional works at: <https://repository.law.umich.edu/mlr>



Part of the [Environmental Law Commons](#), [Environmental Policy Commons](#), and the [Law and Race Commons](#)

Recommended Citation

Kurt Wohlers, *The Particle Problem: Using RCRA Citizen Suits to Fill Gaps in the Clean Air Act*, 121 MICH. L. REV. 325 (2022).

Available at: <https://repository.law.umich.edu/mlr/vol121/iss2/5>

<https://doi.org/10.36644/mlr.121.3.algorithmic>

This Note is brought to you for free and open access by the Michigan Law Review at University of Michigan Law School Scholarship Repository. It has been accepted for inclusion in Michigan Law Review by an authorized editor of University of Michigan Law School Scholarship Repository. For more information, please contact mlaw.repository@umich.edu.

NOTE

THE PARTICLE PROBLEM: USING RCRA CITIZEN SUITS TO FILL GAPS IN THE CLEAN AIR ACT

Kurt Wohlers*

While the Clean Air Act has done a substantial amount for the environment and the health of individuals in the United States, there is still much to be done. For all its complexity, the Act has perpetuated systemic inequities and allowed harms to fall more heavily on low-income communities and communities of color. This is no less true for particulate matter pollution, which is becoming worse by the year and is a significant cause of illness and premature death. This Note argues that particulate pollution, traditionally only regulated on the federal level within the ambit of the Clean Air Act, can be addressed through the Resource Conservation and Recovery Act's citizen suit provision. Such an approach has largely gone untested in the federal courts; however, there are strong arguments in favor of applying the citizen suit provision to particulate matter. This Note also advocates for a simple legislative change that could allow those most harmed by air emissions to seek redress. If adopted, this proposal would supplement the intricate regulatory framework of the Clean Air Act with a way for communities, particularly communities of color and poor communities, to seek relief when pollution slips through the cracks.

TABLE OF CONTENTS

INTRODUCTION.....	326
I. THE HARMS OF AIR POLLUTION	326
A. <i>The Current State of Air Pollution</i>	327
B. <i>Environmental Justice and Impact on Marginalized Groups</i>	328
II. GAPS IN THE CLEAN AIR ACT	329
A. <i>Unregulated Pollution from Stationary Sources</i>	330

* J.D., May 2022, University of Michigan Law School. A massive thank you to Professor Andy Buchsbaum, who provided invaluable insight, feedback, and support. This Note would not exist without your help. Thank you to the editors of the *Michigan Law Review* and the Notes Office, whose unpaid and uncredited labor far too often goes unappreciated in the legal profession—I am immensely grateful for your comments and edits. Finally, thank you to environmental justice lawyers and activists who push for reform, as well as the public defenders, legal aid attorneys, and public interest lawyers who work every day to challenge the inequalities in our legal system and fight for the rights of those in need.

	B. <i>Harms from Permitted Sources</i>	333
III.	THE RESOURCE CONSERVATION AND RECOVERY ACT	335
	A. <i>The Unique Citizen Suit Provision</i>	335
	B. <i>RCRA Citizen Suits as a Gap-Filler in the Clean Water Act</i>	337
	C. <i>RCRA and Gaseous Matter</i>	338
	1. Cases Concerning Particulate Matter	339
	2. Cases Concerning Gaseous Matter.....	340
IV.	PROPOSED SOLUTIONS	342
	A. <i>Attempting More ISE Suits in PM Cases</i>	344
	B. <i>Amending the RCRA Citizen Suit Provision</i>	349
	CONCLUSION	351

INTRODUCTION

The complex regulatory framework of the Clean Air Act (CAA) has failed communities by allowing harmful pollutants to seep through the cracks of the law. This Note suggests a novel solution to some of those gaps: using the Resource Conservation and Recovery Act's (RCRA) imminent and substantial endangerment suit provision to prevent and remedy harms caused by air emissions. Part I discusses the current harms of air pollution and the unique impact of those harms on marginalized groups. Part II considers gaps in the CAA, using two examples as case studies. Part III introduces the RCRA citizen suit provision and considers how courts have treated this provision in the context of solid waste disposals in water and air. Finally, Part IV proposes a solution to fill gaps in the CAA through RCRA citizen suits. The RCRA citizen suit provision currently allows litigants to bring claims involving particulate matter, except where defendants are protected by Title V permit shields or where the suit concerns gaseous waste. In such cases, addressing these harms will likely require changes to the statutory language. This proposal engages with a precautionary principle—asking how little harm is possible rather than how much harm is allowable. It also equips communities with a tool to fight harms when and where they occur, rather than requiring reliance on a complex regulatory framework that often fails to protect those most affected by unbreathable and unlivable air conditions.

I. THE HARMS OF AIR POLLUTION

While air quality regulation has brought some good, there is still much to be done. To understand where the CAA has gone wrong, it is necessary to discuss how particulate matter pollution impacts the lives of millions of people, including predominantly those in marginalized communities.

A. The Current State of Air Pollution

Particulate matter is “a mixture of solid particles and liquid droplets found in the air.”¹ It often consists of dust, soot, organic compounds, and metals.² The United States Environmental Protection Agency (EPA) divides particulate matter into two categories: PM₁₀, which is generally ten micrometers or smaller, and PM_{2.5}, which is generally two and a half micrometers or smaller.³ The EPA did not have a regulatory standard for PM_{2.5} until 1997, and the effects of inhaling particulate matter are still not fully understood.⁴ What is known is this: fine particles can enter the bloodstream, harm the respiratory system, and accumulate in the brain.⁵ Particle pollution has been linked to dementia, cognitive decline, increased infant mortality, cardiovascular disease, childhood asthma, cancer, and nervous system harm, among other issues.⁶ These harms are acute in metropolitan areas like Detroit, where environmental racism is pervasive, and every year 2,500 children have asthma attacks related to air pollution.⁷ Lowering particle pollution by as little as 1 µg/m³ (one microgram per cubic meter) could prevent approximately 34,000 premature deaths every year in the United States.⁸ Unfortunately, we are headed in the wrong direction. From 2016 to 2019, PM_{2.5} concentration levels rose by 5.5 percent.⁹

Wildfires, which have been on the rise in recent years, account for some of the increase in particle pollution in the United States.¹⁰ Currently, wildfires account for up to 25 percent of pollution from fine particles.¹¹ Recent public

1. *Particulate Matter (PM) Basics*, EPA, <https://www.epa.gov/pm-pollution/particulate-matter-pm-basics> [perma.cc/JR4R-WNMU] (last updated July 18, 2022).

2. *Id.*

3. *Id.*

4. Christopher Ingraham, *Air Pollution Is Getting Worse, and Data Show More People Are Dying*, WASH. POST (Oct. 23, 2019, 7:00 AM), <https://www.washingtonpost.com/business/2019/10/23/air-pollution-is-getting-worse-data-show-more-people-are-dying> [perma.cc/5THS-GN7M].

5. *Id.*

6. *Id.*; *Particle Pollution*, AM. LUNG ASS'N, <https://www.lung.org/clean-air/outdoors/what-makes-air-unhealthy/particle-pollution> [perma.cc/6NUF-BDSG] (last updated Apr. 20, 2020).

7. Steve Neavling, *Struggling to Breathe in 48217, Michigan's Most Toxic ZIP Code*, DETROIT METRO TIMES (Jan. 8, 2020, 1:00 AM), <https://www.metrotimes.com/detroit/struggling-to-breathe-in-48217-michigans-most-toxic-zip-code/Content?oid=23542211> [perma.cc/9UH2-8D6L].

8. *Particle Pollution*, *supra* note 6.

9. Ingraham, *supra* note 4.

10. Ingraham, *supra* note 4. While this Note does not assert a solution to the problem of wildfires, it is relevant to mention that they are on the rise, as increasing wildfires will make it all the more necessary to reduce particle pollution from human sources.

11. Tony Barboza, *Wildfire Smoke Now Causes Up to Half the Fine-Particle Pollution in Western U.S., Study Finds*, L.A. TIMES (Jan. 13, 2021, 5:00 AM), <https://www.latimes.com/california/story/2021-01-13/wildfire-smoke-fine-particle-pollution-western-us-study> [perma.cc/8B44-QFGV].

health studies have found that in areas near major wildfires, there was a 10 percent increase in hospital admissions¹² and an 11.7 percent increase in COVID-19 cases.¹³ And barring a dramatic increase in efforts to abate greenhouse gas emissions and slow climate change, wildfires will only become more pervasive, intensifying the impacts of particle pollution.

B. *Environmental Justice and Impact on Marginalized Groups*

The ability to breathe depends on where a person lives. According to a recent study, “a child born in Los Angeles County in 2016 was exposed to 42% more fine particle pollution than the average child born in the United States.”¹⁴ And as Dr. Mustafa Santiago Ali, a founding member of the EPA Office of Environmental Justice, has remarked: “More people die [prematurely] every year in our country from air pollution than died from the wars in Iraq and Afghanistan, Vietnam, and the Korean War combined.”¹⁵ These harms are significant, and there is no question that the harms of air particle pollution have not fallen evenly across all groups. The areas most impacted by fine particle pollution in 1981 are still the areas most impacted today, and the areas least impacted—generally whiter and richer—are still the least impacted today.¹⁶ Black Americans are exposed to 21 percent more fine particle pollution than the national average, whereas white Americans were exposed to amounts 8 percent below the national average.¹⁷ Exposure to fine particulate matter from diesel trucks, construction work, and other industry sources depends on race.¹⁸ In 1987, the United Church of Christ (UCC) issued a groundbreaking report finding widespread environmental racism in determining

12. Nathan Rott, *Study Finds Wildfire Smoke More Harmful to Humans than Pollution from Cars*, NPR (Mar. 5, 2021, 5:00 AM), <https://www.npr.org/sections/health-shots/2021/03/05/973848360/study-finds-wildfire-smoke-more-harmful-to-humans-than-pollution-from-cars> [perma.cc/23VT-RFWA] (using data from Southern California).

13. Press Release, *Wildfire Smoke May Have Contributed to Thousands of Extra COVID-19 Cases and Deaths in Western U.S. in 2020*, HARVARD T.H. CHAN SCH. OF PUB. HEALTH (Aug. 20, 2021), <https://www.hsph.harvard.edu/news/press-releases/wildfire-smoke-may-have-contributed-to-thousands-of-extra-covid-19-cases-and-deaths-in-western-u-s-in-2020> [perma.cc/7UKX-4PCB] (using data from California, Oregon, and Washington).

14. Jonathan Colmer & Jay Shimshack, *Air Pollution Down in the U.S. but Still Hurts Marginalized Communities Most*, PBS (Aug. 3, 2020, 5:57 PM), <https://www.pbs.org/news-hour/health/air-pollution-down-in-the-u-s-but-still-hurts-marginalized-communities-most> [perma.cc/LR47-G2R4].

15. Mustafa Santiago Ali, *Keynote Speech: Raven Lecture on Access to Justice*, 46 *ECOLOGY L.Q.* 921, 925 (2019).

16. Colmer & Shimshack, *supra* note 14.

17. Zack Budryk, *Fine-Particle Pollution Disproportionately Hurts People of Color: Research*, HILL (Apr. 28, 2021, 3:13 PM), <https://thehill.com/policy/energy-environment/550762-fine-particle-pollution-disproportionately-hurts-people-of-color> [perma.cc/EC8L-PW8N].

18. *Id.*

sites for toxic waste facilities.¹⁹ This report, along with other evidence, played a foundational role in the creation of the environmental justice movement.²⁰ When the UCC reviewed their data twenty years later, they found that race still played a predominant role in understanding where toxic wastes were sited.²¹

This also remains true for air pollution. Racial residential segregation through zoning policies, property laws, and credit rationing has allowed air pollution facilities more access to neighborhoods where marginalized groups live.²² As of 2017, more than one million Black individuals live within a half mile of an oil and gas facility.²³ Many of the pollutants emitted from these facilities, such as methane and benzene,²⁴ will not be adequately covered by a solution that only applies to particulate matter.²⁵ Therefore, to address widespread environmental racism as it relates to air pollution, a proposal that contemplates gas emissions must be considered.

The 2007 UCC Report suggests that environmental justice should emphasize a precautionary principle: instead of focusing on how much harm is allowable, the law should consider how little harm is possible.²⁶ This precautionary principle of harm elimination plays a guiding role in shaping this Note's solution. Rather than set maximum limits and permit some amount of pollution to go unchecked, this Note suggests a solution that seeks to stop harm whenever and wherever it occurs.

II. GAPS IN THE CLEAN AIR ACT

Unlike the Clean Water Act (CWA), which begins with the presumption that a discharge from a point source requires a permit, the CAA's regulatory

19. COMM'N FOR RACIAL JUST., UNITED CHURCH OF CHRIST, TOXIC WASTES AND RACE IN THE UNITED STATES (1987), <https://www.nrc.gov/docs/ML1310/ML13109A339.pdf> [perma.cc/E7E4-TP4K].

20. Renee Skelton & Vernice Miller, *The Environmental Justice Movement*, NRDC (Mar. 17, 2016), <https://www.nrdc.org/stories/environmental-justice-movement> [perma.cc/2FRD-5WHF].

21. ROBERT D. BULLARD, PAUL MOHAI, ROBIN SAHA & BEVERLY WRIGHT, UNITED CHURCH OF CHRIST, TOXIC WASTES AND RACE AT TWENTY 1987–2007 (2007), <https://www.nrdc.org/sites/default/files/toxic-wastes-and-race-at-twenty-1987-2007.pdf> [perma.cc/R7UN-UEDQ].

22. Bongki Woo et al., *Residential Segregation and Racial/Ethnic Disparities in Ambient Air Pollution*, 11 RACE & SOC. PROBS. 60, 60–61 (2019). Government response to air quality concerns can also vary substantially based on race. See Aneesh Patnaik, Jiahn Son, Alice Feng & Crystal Ade, *Racial Disparities and Climate Change*, PRINCETON STUDENT CLIMATE INITIATIVE (Aug. 15, 2020), <https://psci.princeton.edu/tips/2020/8/15/racial-disparities-and-climate-change> [perma.cc/E3B7-Q4QS].

23. LESLEY FLEISCHMAN & MARCUS FRANKLIN, NAACP & CLEAN AIR TASK FORCE, FUMES ACROSS THE FENCE—LINE 11 (2017), <https://cdn.catf.us/wp-content/uploads/2017/11/21092330/catf-rpt-naacp-4.21.pdf> [perma.cc/5RQH-79KC].

24. *Id.* at 12.

25. For further discussion on the particulate and gas distinction, see *infra* Section III.C.

26. BULLARD ET AL., *supra* note 21, at 8.

framework varies from state to state and pollutant to pollutant.²⁷ This complex framework creates a series of small gaps that together form giant holes, as discussed in Section II.A. And even when permits are required, they still enable harms. A solution that seeks to limit harm needs to consider the power of the permit shield, as illustrated in Section II.B.

A. *Unregulated Pollution from Stationary Sources*

While the CAA defines “air pollutant” broadly,²⁸ the reach of regulation permitted by statute is not nearly as broad. A list of what is not regulated, or underregulated, includes: pollutants not specified in the National Ambient Air Quality Standards (NAAQS)²⁹ or Hazardous Air Pollutant Standards,³⁰ nonmajor stationary sources,³¹ sources in attainment areas,³² existing sources,³³ and indirect sources.³⁴

For an easy example of the CAA’s regulatory gaps, consider the Act’s designation of attainment areas. Generally, the EPA looks at certain “criteria air pollutants” and determines if geographic areas meet the national standards for those pollutants. If they do not, they are designated as “nonattainment” areas subject to additional regulation to get them back on track.³⁵ But this structure ignores “hotspots,” such as neighborhoods near an airport or oil refinery.³⁶ Consequently, while some broad areas may be labeled “in attainment,” this

27. Compare 33 U.S.C. § 1311(a) (“Except as in compliance with this section and sections 1312, 1316, 1317, 1328, 1342, and 1344 of this title, the discharge of any pollutant by any person shall be unlawful.”), with 42 U.S.C. § 7407(a) (requiring states to submit their implementation plans to achieve air quality standards), and 42 U.S.C. § 7412(b)(1) (designating only certain pollutants as “hazardous air pollutants”).

28. See 42 U.S.C. § 7602(g).

29. See *NAAQS Table*, EPA, <https://www.epa.gov/criteria-air-pollutants/naaqs-table> [perma.cc/HFC7-34AP] (last updated Apr. 5, 2022) (listing carbon monoxide, lead, nitrogen dioxide, ozone, particle pollution, and sulfur dioxide as “criteria” air pollutants” regulated under NAAQS).

30. See *What Are Hazardous Air Pollutants?*, EPA, <https://www.epa.gov/haps/what-are-hazardous-air-pollutants> [perma.cc/74FY-57JW] (last updated Jan. 5, 2022).

31. See *Regulatory and Guidance Information by Topic: Air*, EPA, <https://www.epa.gov/regulatory-information-topic/regulatory-and-guidance-information-topic-air> [perma.cc/AF9D-LNN8] (last updated June 21, 2022).

32. See 42 U.S.C. § 7502 (listing requirements for areas only in nonattainment).

33. See *West Virginia v. EPA*, 142 S. Ct. 2587, 2601 (2022) (noting that once EPA sets new source standards for a particular pollutant, it must then address emissions from existing sources of the same pollutant only in certain circumstances).

34. See 42 U.S.C. § 7410(a)(5)(A)(i) (“Any State may include in a State implementation plan, but the Administrator may not require as a condition of approval of such plan under this section, any indirect source review program.”).

35. *NAAQS Designations Process*, EPA, <https://www.epa.gov/criteria-air-pollutants/naaqs-designations-process> [perma.cc/2NUZ-LGLG] (last updated Nov. 26, 2021).

36. Ann E. Carlson, *The Clean Air Act’s Blind Spot: Microclimates and Hotspot Pollution*, 65 UCLA L. REV. 1036, 1041 (2018).

may not describe the reality for much of the population living there, particularly for those who live next to an existing stationary source that is almost entirely unregulated.³⁷

Satellite data suggests that the EPA has frequently misclassified areas as “in attainment” for particulate matter in cities such as Chicago, San Diego, Houston, St. Louis, and Cincinnati.³⁸ This indicates that 24.4 million people live in areas wrongly designated as “in attainment” for PM_{2.5}.³⁹ Moreover, because only 21 percent of counties in the United States have PM_{2.5} monitors, many “hotspots” of particle pollution may appear to be “in attainment” even though they are not.⁴⁰ If the EPA properly classified these areas, the number of people living in nonattainment areas would more than double,⁴¹ potentially avoiding 2,726 premature deaths per year.⁴² ProPublica has also done critical research in this area, finding thousands of toxic hotspots across the United States, which create cancer risks that the EPA itself deems unacceptable.⁴³ The EPA’s misclassification of attainment areas is just one example of how gaps in the CAA independently cause harm.

For a more complicated example of how the CAA’s gaps overlap to cause harm, consider the following case study. Under the CAA, states are permitted to regulate indirect sources⁴⁴ but are prohibited from regulating new locomotives.⁴⁵ The EPA, conversely, may regulate new locomotives,⁴⁶ but the EPA may not regulate indirect sources.⁴⁷ Given that the EPA standards for new locomotives only began to phase in during 2011, and locomotives have a replacement cycle of thirty to forty years,⁴⁸ old locomotives in railyards will

37. *Id.* at 1048, 1077–78.

38. Daniel M. Sullivan & Alan Krupnick, *Using Satellite Data to Fill the Gaps in the US Air Pollution Monitoring Network* 2, 32 (Res. for the Future, Working Paper No. 18-21, 2018), https://media.rff.org/documents/RFF20WP-18-21_0.pdf [perma.cc/F94D-D29C].

39. *Id.* at 13.

40. *See id.* at 2–3.

41. *Id.* at 13. The researchers offer an important caveat: this massive miscalculation is likely a *conservative* estimate. *Id.* at 17.

42. *Id.* at 16.

43. Al Shaw & Lylla Younes, *The Most Detailed Map of Cancer-Causing Industrial Air Pollution in the U.S.*, PROPUBLICA (Mar. 15, 2022), <https://projects.propublica.org/toxmap> [perma.cc/ERF3-QG]6].

44. Generally, facilities that attract mobile sources of pollution (but not federally assisted highways or airports, which the EPA may regulate). *See* 42 U.S.C. § 7410(a)(5).

45. *Id.* § 7543(e)(1). State and local attempts to pass environmental regulations concerning locomotives are also sometimes frustrated by other areas of federal law. *See, e.g.*, BNSF Ry. Co. v. Clark Cnty., 11 F.4th 961, 972 (9th Cir. 2021) (finding regulation preempted by the Interstate Commerce Commission Termination Act because it would burden railroad activity); Ass’n. of Am. R.Rs. v. S. Coast Air Quality Mgmt. Dist., 622 F.3d 1094, 1098 (9th Cir. 2010) (same).

46. *See* 40 C.F.R. § 1033 (2021).

47. 42 U.S.C. § 7410(a)(5)(A).

48. Kevin Downing, Robert McCullough & Eric Shierman, *The Hidden Killer: Towards Regulating Railyard Diesel Particulate Matter Emissions in Oregon*, HATFIELD GRADUATE J. PUB. AFFS., Aug. 2019, at 1, 12.

remain underregulated until they are replaced or remanufactured. Individuals located near diesel engines, like locomotives, are at substantial risk of exposure to diesel particulate matter (DPM).⁴⁹ DPM contains a number of harmful metals and compounds, such as arsenic and lead,⁵⁰ and it is classified as a known human carcinogen.⁵¹ In *Center for Community Action*, California residents sought to abate the harms caused by DPM emissions from railyards in their community through a unique method: the Resource Conservation and Recovery Act (RCRA) citizen suit provision.⁵²

The plaintiffs represented communities of individuals in the Riverside and San Bernardino areas of southern California; one community in particular, the Westside of San Bernardino, has the highest cancer rate from railyard pollution in the state (3,300 per million).⁵³ This community is largely made up of poor individuals, including many Latino immigrants.⁵⁴

The RCRA citizen suit provision will be discussed in more detail,⁵⁵ but for now, a brief primer—two kinds of individuals may be sued under the provision: “any person” or “the Administrator” of the EPA.⁵⁶ There are two provisions within the “any person” subsection—suits based on a violation of a RCRA permit, standard, regulation, and the like, or suits under section (a)(1)(B), which are not based on a RCRA violation, but commence against anyone responsible for “solid or hazardous waste which may present *an imminent and substantial endangerment to health or the environment.*”⁵⁷ It is this imminent and substantial endangerment provision that the plaintiffs in *Center for Community Action* used, and it is the focus of the proposals advocated for in this Note.

The plaintiffs argued that the CAA gap discussed above provides inadequate regulation.⁵⁸ The two defendant companies owned sixteen railyards in

49. OSHA & MINE SAFETY & HEALTH ADMIN., DIESEL EXHAUST/DIESEL PARTICULATE MATTER 1 (2013) [hereinafter OSHA, DIESEL EXHAUST], <https://www.osha.gov/sites/default/files/publications/OSHA-3590.pdf> [perma.cc/574X-KEHM].

50. First Amended Complaint for Declaratory and Injunctive Relief at para. 25, *Ctr. for Cmty. Action & Env’t Just. v. Union Pac. Corp.*, No. CV 11-08608, 2012 WL 2086603 (C.D. Cal. May 29, 2012).

51. OSHA, DIESEL EXHAUST, *supra* note 49, at 2.

52. First Amended Complaint for Declaratory and Injunctive Relief, *supra* note 50, at paras. 35–41.

53. *Id.* at para. 10.

54. *Id.*

55. See *infra* Section III.A.

56. 42 U.S.C. § 6972(a).

57. *Id.* (emphasis added).

58. *Ctr. for Cmty. Action & Env’t Just. v. Union Pac. Corp.*, No. CV 11-08608, 2012 WL 2086603, at *4 (C.D. Cal. May 29, 2012) (“California cannot regulate locomotives, the primary DPM sources in railyards; the EPA can regulate locomotives, but cannot regulate railyards because they are indirect sources of air pollution.”), *aff’d sub nom.* *Ctr. for Cmty. Action & Env’t Just. v. BNSF Ry. Co.*, 764 F.3d 1019 (9th Cir. 2014).

California.⁵⁹ In 2005, the group of railyards emitted over 160 tons of diesel particulate matter.⁶⁰ In an opinion by District Judge S. James Otero,⁶¹ the court denied the plaintiffs' claims, finding that the proposed application of RCRA would conflict with the CAA and that DPM is not a "solid waste" within the meaning of RCRA.⁶² The Ninth Circuit affirmed, though on different grounds.⁶³

At the time of the suit, the defendants were proposing the construction of a new railyard.⁶⁴ A recent article suggests that, despite initial hiccups, that project is moving forward.⁶⁵ Environmental analysis shows that the expected emissions of DPM and other pollutants "would exceed state and federal standards in almost all versions of the project if it's completed," and the project will be sited within communities of color in West Long Beach—where the average life expectancy is seven years lower than other parts of the city—near schools, parks, and residential areas.⁶⁶

These are not imaginary or de minimis harms. These gaps in the CAA put millions of people at an unnecessarily increased risk of cancer and other health problems. Communities closest to railyards where the effects of DPM are most concentrated, often communities of color, suffer the most. This case highlights the necessity of providing people with a remedy when their lives and the environment are put at substantial risk of harm due to statutory or regulatory oversight. It is the result of an environmental policy that asks how much harm is allowable rather than how little harm is possible.

B. *Harms from Permitted Sources*

Only major sources of air pollution and certain facilities require a Title V operating permit under the CAA,⁶⁷ leaving a significant number of emissions un- or underregulated. Despite their protective intent, permits often sanction

59. *Id.* at *1.

60. First Amended Complaint for Declaratory and Injunctive Relief, *supra* note 50, at para. 27.

61. Before joining the bench, Judge Otero served as regional counsel for the Southern Pacific Transportation Company, a railroad. See Hon. James Otero (Ret.), LINKEDIN, <https://www.linkedin.com/in/hon-james-otero-ret-a258031a7> [perma.cc/4S6U-8BTT].

62. *Ctr. for Cmty. Action*, 2012 WL 2086603, at *6, *9.

63. *Ctr. for Cmty. Action & Env't Just. v. BNSF Ry. Co.*, 764 F.3d 1019 (9th Cir. 2014).

64. First Amended Complaint for Declaratory and Injunctive Relief, *supra* note 50, at para. 4.

65. Jason Ruiz, *New Environmental Analysis Revives Controversial Rail Yard Project*, LONG BEACH POST NEWS (June 29, 2021, 9:00 AM), <https://lbpost.com/news/new-environmental-analysis-revives-controversial-rail-yard-project> [perma.cc/3Y3H-XCC3].

66. *Id.*

67. *Who Has to Obtain a Title V Permit?*, EPA, <https://www.epa.gov/title-v-operating-permits/who-has-obtain-title-v-permit> [perma.cc/K7K9-BMDE] (last updated May 25, 2022). Major sources are defined as those emitting more than 100 tons of any pollutant each year, 10 tons of one hazardous air pollutant, or 25 tons combined of multiple hazardous air pollutants. Specified facilities include, for example, medical waste incinerators. *Id.*

environmental harms by providing cover from liability. Title V permits can create “permit shields,” which act as a defense against lawsuits.⁶⁸ If a defendant possesses a permit with a permit shield provision, they cannot be the subject of a citizen suit, so long as they are complying with the terms of the permit.⁶⁹ Even where there is no permit shield, the only way to challenge the validity of a permit is through the CAA’s judicial review provision rather than a citizen suit.⁷⁰

In *Little v. Louisville Gas & Electric Co.*, for example, the defendant operated a power plant that emitted coal ash and dust onto the plaintiffs’ properties.⁷¹ Residents in the area described the emissions from the 1950s-era plant as “pounds upon pounds of ash blowing in your face.”⁷² This dust and ash were not just annoying but dangerous.⁷³ Children exposed to coal ash suffer gastrointestinal complications at a rate six times higher than average, ADHD at rates three-and-a-half times greater than average, and are more likely to experience trouble sleeping.⁷⁴ People near the power plant learned to keep their kids inside and their doors and windows shut.⁷⁵

The Louisville residents raised CAA and RCRA claims, which the defendant power plant moved to dismiss. The court dismissed most of the CAA claims and agreed that the challenged emissions were authorized and therefore not subject to a RCRA citizen suit.⁷⁶ The coal plant was eventually replaced with a natural gas plant, reducing some emissions,⁷⁷ but not before a

68. Eugene E. Dice, *Cracks in EPA Permit Shields? Circuits Will Assess Damage*, LAW360 (June 4, 2014, 4:47 PM), <https://www.law360.com/articles/544187/cracks-in-epa-permit-shields-circuits-will-assess-damage> [perma.cc/MK6W-D59Z].

69. *Id.*

70. *Id.*

71. 33 F. Supp. 3d 791, 796 (W.D. Ky. 2014), *aff’d*, 805 F.3d 695 (6th Cir. 2015).

72. James Bruggers, *Sixty Years of Coal Burning Ends at LG&E Plant*, COURIER J. (July 7, 2015, 3:16 PM), <https://www.courier-journal.com/story/tech/science/environment/2015/07/06/lge-ku-energy-dedicates-new-natural-gas-power-plant-cane-run-property/29762011> [perma.cc/FV4G-WMNS].

73. The plaintiffs argued that the dust and ash contained arsenic, silica, lead, and chromium. *Little*, 33 F. Supp. 3d at 796. Fine particulate matter like soot has also been shown to have a harmful impact on endangered species and their habitats. Press Release, *Lawsuit Filed to Protect Endangered Wildlife, Plants from Dangerous Soot*, CTR. FOR BIOLOGICAL DIVERSITY (Feb. 9, 2021), <https://biologicaldiversity.org/w/news/press-releases/lawsuit-filed-to-protect-endangered-wild-life-plants-from-dangerous-soot-2021-02-09> [perma.cc/EB7L-7YDU].

74. Ryan Van Velzer, *After Years of Coal Ash Exposure, Scientists Assess Health of Cane Run Neighbors*, WFPL (July 24, 2018), <https://wfpl.org/after-years-of-coal-ash-exposure-scientists-assess-health-of-cane-run-neighbors> [perma.cc/5XDE-PQWC].

75. *Id.*

76. *Little*, 33 F. Supp. 3d at 796–807, 812–14.

77. Bruggers, *supra* note 72.

substantial amount of harm had already been done. In a recent study, 85 percent of Louisville parents near coal plants reported that their children suffered health issues, such as respiratory or behavioral disorders.⁷⁸

For children in Louisville who live with chronic respiratory, behavioral, and other health issues caused by the Louisville plants, it seems almost impossible to say that the toxic ash, which covered the yards where they played and the streets on which they walked to school, did not present an “imminent and substantial endangerment” to their health.⁷⁹ Yet they were not able to get relief in federal court because of the CAA’s permit scheme. This gap is one that RCRA citizen suits could remedy, and in so doing, push for environmental policies that promote a precautionary principle of harm elimination.

III. THE RESOURCE CONSERVATION AND RECOVERY ACT

RCRA emerged from tragedies like that at Love Canal, which involved the disposal of toxic waste under homes and a school, causing birth defects and cancer, and literally burning the hands of children who played there.⁸⁰ RCRA’s stated policy is that “wherever feasible, the generation of hazardous waste [should] be reduced or eliminated as expeditiously as possible.”⁸¹ Additionally, waste “should be treated, stored, or disposed of so as to minimize the present and future threat to human health and the environment.”⁸²

A. *The Unique Citizen Suit Provision*

Citizen suits are arguably “the engine that propels the field of environmental law.”⁸³ From 1993 to 2002, roughly 75 percent of all civil environmental cases were citizen suits.⁸⁴ RCRA’s citizen suit provision, 42 U.S.C. § 6972, allows for two kinds of suits against another person: (a)(1)(A) suits, which

78. Kristina M. Zierold & Clara G. Sears, *Community Views About the Health and Exposure of Children Living Near a Coal Ash Storage Site*, 40 J. CMTY. HEALTH 357 (2015); see also James Bruggers, *U of L Studies How Coal Ash Affects Kids’ Health*, COURIER J. (Apr. 18, 2017, 11:00 AM), <https://www.courier-journal.com/story/tech/science/environment/2017/04/17/u-l-studies-how-coal-ash-affects-kids-health/100568932> [perma.cc/MJP8-5Y4S]. Coal plants also emit more mercury than any other nonnatural source, and exposure to mercury during pregnancy is linked to neurological abnormalities. *Michigan v. EPA*, 576 U.S. 743, 768 (2015) (Kagan, J., dissenting); see also *Michigan v. Environmental Protection Agency*, 5-4 POD, at 19:39 (Nov. 16, 2021), <https://www.fivefourpod.com/episodes/michigan-v-environmental-protection-agency> [perma.cc/CDJ2-7S64] (“Mercury is so dangerous that you’re not even supposed to eat like two cans of tuna at once. . . . And these places are just pumping it into the air.”).

79. See 42 U.S.C. § 6972(a)(1)(B).

80. Eckardt C. Beck, *The Love Canal Tragedy*, EPA, <https://archive.epa.gov/epa/aboutepa/love-canal-tragedy.html> [perma.cc/6VR5-LC29] (last updated Sept. 22, 2016).

81. 42 U.S.C. § 6902(b).

82. *Id.*

83. James R. May, *Now More than Ever: Trends in Environmental Citizen Suits at 30*, 10 WIDENER L. REV. 1, 7 (2003).

84. *Id.* at 8.

require a violation of a RCRA “permit, standard, regulation, condition, requirement, prohibition, or order,” and (a)(1)(B) suits, which may commence 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.”⁸⁵ A plain reading of the statute makes clear that (a)(1)(B) suits (imminent and substantial endangerment, or “ISE” suits) are broader in scope, as they do not require any specific violation of the Act. The ISE provision is “‘essentially a codification of the common law public nuisance’ and is intended to be construed ‘more liberal[ly] than [its] common law counterparts.’”⁸⁶ This sentiment—that the ISE provision should be construed broadly—has been echoed in multiple circuits.⁸⁷ Within the citizen suit provision, the term “solid waste” takes on a broader meaning than it does when that term is used in other parts of the statute.⁸⁸

Understanding the uniqueness of the ISE citizen suit underscores why it can and should be applied more broadly. Section (a)(1)(A)’s focus on violations under RCRA untethers (a)(1)(B) from the rest of the statutory scheme because reading (a)(1)(B) to apply only to RCRA violations would render that portion of the statute duplicative. Instead, (a)(1)(B) must be understood as a freestanding suit provision, bound to RCRA only in the sense that it is concerned with RCRA’s definitions of solid or hazardous waste. It is also closer to the precautionary principle of harm elimination than other environmental statutes’ citizen suit provisions, asking whether harm is imminent and substantial rather than merely permitted by statute.⁸⁹ This difference has already proven useful in covering gaps in other statutory schemes, such as those in the Clean Water Act (CWA).

85. 42 U.S.C. § 6972(a)(1).

86. *Fresh Air for the Eastside, Inc. v. Waste Mgmt. of N.Y., L.L.C.*, 405 F. Supp. 3d 408, 434–45 (W.D.N.Y. 2019) (alterations in original) (citation omitted).

87. *E.g., Me. People’s All. v. Mallinckrodt, Inc.*, 471 F.3d 277, 297 (1st Cir. 2006) (“[W]e perceive a congressional thumb on the scale in favor of remediation.”); *United States v. Waste Indus., Inc.*, 734 F.2d 159, 167 (4th Cir. 1984) (“[The imminent and substantial endangerment provision] is a congressional mandate that the former common law of nuisance, as applied to situations in which a risk of harm from solid or hazardous wastes exists, shall include new terms and concepts which shall be developed in a liberal, not a restrictive, manner.”); *United States v. Price*, 688 F.2d 204, 211 (3d Cir. 1982) (“By enacting the endangerment provisions of RCRA . . . Congress sought to invoke the broad and flexible equity powers of the federal courts in instances where hazardous wastes threatened human health.” (citation omitted)); *AM Int’l, Inc. v. Datacard Corp.*, 106 F.3d 1342, 1349 (7th Cir. 1997) (describing how the (a)(1)(B) ISE provision permits a broader range of suits than its (a)(1)(A) counterpart).

88. *Conn. Coastal Fishermen’s Ass’n v. Remington Arms Co.*, 989 F.2d 1305, 1308 (2d Cir. 1993).

89. *See* 33 U.S.C. § 1365(a)(1) (requiring a violation of an effluent standard or limitation or an order from the Administrator relating to such standard or limitation); 42 U.S.C. § 7604(a)(1) (requiring a violation of an emissions standard or limitation, or an Administrator or State order relating to such standard or limitation); *id.* § 7604(a)(3) (allowing suits against new facilities only where there were certain prior Act violations).

B. RCRA Citizen Suits as a Gap-Filler in the Clean Water Act

RCRA's ISE citizen suit provision has already been applied outside the context of RCRA itself to include water pollution. In *Connecticut Coastal Fishermen's Ass'n v. Remington Arms*, a gun club had allowed its 40,000 annual patrons to shoot guns over the waters of the Long Island Sound for decades.⁹⁰ Close to five million pounds of lead shot and eleven million pounds of clay target fragments polluted the water and surrounding land.⁹¹ Plaintiffs sued under both the CWA and RCRA. Because the gun club had already ceased operation, the court dismissed the CWA claims because of a failure to allege an "ongoing violation" as required by precedent.⁹²

The Second Circuit began its analysis of the plaintiffs' remaining RCRA claim by noting the distinction between section 6972(a)(1)(A) (which invokes a narrow regulatory-focused definition of solid waste) and section 6972(a)(1)(B) (which invokes the broader statutory definition).⁹³ Solid waste is defined by the statute as "any garbage, refuse . . . and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities."⁹⁴

Consistent with other courts,⁹⁵ the Second Circuit found that material is "discarded" when it is left to accumulate after serving its intended purpose.⁹⁶ The court therefore concluded that under this broad statutory definition, lead shot and clay targets were solid wastes.⁹⁷ As such, the plaintiffs' RCRA citizen suit did not fall prey to the same gap that their CWA citizen suit did because "under an imminent hazard citizen suit, the endangerment must be ongoing, but the conduct that created the endangerment need not be."⁹⁸ In other words, citizen suits under RCRA may commence even if the disposal is wholly past,⁹⁹ so long as the dangerous potential of that disposal is lingering. The ongoing violation requirement of the CWA can be seen as a gap in the law. In this case, were it not for RCRA, the requirement of an ongoing violation would result in allowing millions of pounds of toxic lead to sit in the waters of the Long Island Sound, causing needless harm for decades to come. Fortunately, the court did not let that happen.

90. 989 F.2d at 1308.

91. *Id.*

92. *Id.* at 1310–12.

93. *Id.* at 1314–15.

94. 42 U.S.C. § 6903(27).

95. See, e.g., *Charleston Waterkeeper v. Frontier Logistics, L.P.*, 488 F. Supp. 3d 240, 256 (D.S.C. 2020) (collecting cases from three other federal district courts).

96. *Conn. Coastal*, 989 F.2d at 1316.

97. *Id.*

98. *Id.*

99. *But cf. Gwaltney of Smithfield, Ltd. v. Chesapeake Bay Found., Inc.*, 484 U.S. 49 (1987) (holding that "wholly past" violations of the CWA are not subject to citizen suit).

Remington Arms is notable for what the Second Circuit did not do. The court did not focus on the notion that ‘RCRA is about land, CWA is about water.’ Instead, the court interpreted and applied the plain text of the statute. The Second Circuit took the plaintiffs’ invitation to use the ISE provision to remedy a gap, rather than leaving millions of pounds of lead at the bottom of a lake to poison wildlife, swimmers, and (as sea levels rise) residents in the surrounding area. This Note considers the extent to which RCRA’s statutory definition of “solid waste” can be used to similarly extend the application of the ISE provision to address particulate and gaseous matter pollutants.

C. RCRA and Gaseous Matter

First, it is important to note the distinction between particulate matter and gas. Courts often fail to make this distinction at the outset, leading to substantial confusion. Particulate matter is not gas but instead is “fine solid particles suspended in a gas.”¹⁰⁰ Particulate matter can also be very small liquid droplets suspended in a gas or the atmosphere.¹⁰¹ Common causes of particulate matter include incomplete fossil fuel combustion and construction activity.¹⁰² Once emitted into the troposphere, particles are removed through rainfall or eventually stick to various surfaces (though some larger particles reach the ground through the force of gravity).¹⁰³ This is to say that particulate matter generally consists of solids and liquids suspended in gas, which is an important distinction to make when considering how RCRA defines the term “solid waste.”

When first enacted, RCRA did not regulate air emissions; however, it was amended in 1984 to regulate air emissions at hazardous waste treatment, storage, and disposal facilities.¹⁰⁴ This was done in response to the EPA’s inaction on regulating such facilities under the CAA,¹⁰⁵ providing some evidence that RCRA is not only about solid waste on the ground but also about air emissions. Additionally, it provides evidence of Congress’s interest in using RCRA

100. DIPAK K. SARKAR, THERMAL POWER PLANT 479 (2015).

101. J.A. Geddes & J.G. Murphy, *The Science of Smog: A Chemical Understanding of Ground Level Ozone and Fine Particulate Matter*, in METROPOLITAN SUSTAINABILITY 206 (Frank Zeman, ed., 2012).

102. *Id.*

103. Geddes & Murphy, *supra* note 101, at 208. Admittedly, this analysis is complicated by the fact that PM₁₀ is generally emitted directly into the atmosphere, whereas PM_{2.5} is formed from gas or interactions with other chemical compounds in the atmosphere. *Id.* at 213–14. This makes it more difficult to tell if the particulate matter came directly from the smokestack or if it began as a gas and later was converted into particulate matter. This problem will likely be solved by using experts, who often are needed to argue substantial endangerment in the course of litigation. Or, it could be cured by implementing the legislative fix proposed *infra* in Section IV.B. Such a distinction also might not be necessary in cases where people can see the particulate matter cloud touch down after emission. The point is that this is something litigators may have to consider at the outset.

104. *Ctr. for Cmty. Action & Env’t Just. v. BNSF Ry. Co.*, 764 F.3d 1019 (9th Cir. 2014).

105. *Id.* at 1029.

to fill the space where the CAA (or at least the EPA's implementation of it) has failed to regulate air emissions. Against the backdrop of this legislative history and the distinction between particulate matter and gas, this Note considers how courts treat the two kinds of emissions in the RCRA context.

1. Cases Concerning Particulate Matter

In *Center for Community Action*, the Ninth Circuit held that diesel particulate matter (DPM) was not a solid waste because the emission of DPM was not a "disposal."¹⁰⁶ Additionally, the Ninth Circuit did not address, but also did not disturb, the lower court's contention that DPM was not a solid waste.¹⁰⁷

The U.S. District Court for the Southern District of Ohio reached a different result in a case concerning claims of C8 contamination of soil and groundwater caused by DuPont.¹⁰⁸ In that case, DuPont did not contest that it released C8 through air emissions and by dumping the chemical into a river and at sites near their facility.¹⁰⁹ DuPont did, however, contest the ISE suit under RCRA, arguing that air emissions from industrial stacks were not a disposal of solid waste.¹¹⁰ The court considered the holding in *Center for Community Action* but declined to follow the Ninth Circuit's "narrow reading of RCRA's text and legislative history," instead finding the aerial emissions of C8 that fell to the ground were a disposal of solid waste.¹¹¹ The *DuPont* court differentiated its holding from the Ninth Circuit's, writing that "diesel particulate matter fell onto the land, and then was swept back up into the air, causing harm to those who inhaled it. In contrast, . . . solid C8 particles are emitted into the air, fall onto the ground, remain there, and then contaminate the soil and groundwater."¹¹² In essence, the court was more concerned with the destination of the pollutant than the source of emission—contamination of the ground is different from contamination of the groundwater, at least according to the district court.

Two other cases suggest that particulate matter is a solid waste that can be the subject of a RCRA citizen suit. The first is *McEvoy v. IEI Barges Services*,

106. *Id.* at 1020–21.

107. *Ctr. for Cmty. Action & Env't Just. v. Union Pac. Corp.*, No. CV 11-08608, 2012 WL 2086603 (C.D. Cal. May 29, 2012).

108. *Little Hocking Water Ass'n v. E.I. Du Pont de Nemours & Co.*, 91 F. Supp. 3d 940, 947 (S.D. Ohio 2015). Similar litigation was recently featured in the film, *Dark Waters*, the documentary, *The Devil We Know*, and a *Last Week Tonight* episode with John Oliver. See DARK WATERS (Focus Features 2019); THE DEVIL WE KNOW (Atlas Films 2018); LastWeekTonight, PFAS: Last Week Tonight with John Oliver (HBO), YOUTUBE (Oct. 3, 2021), <https://youtu.be/9W74aeuqsiU>.

109. *Du Pont*, 91 F. Supp. 3d at 947–48.

110. *Id.* at 962–63.

111. *Id.* at 965.

112. *Id.*

which involved CAA, RCRA, and common law tort claims against the operator of a coal transfer and storage facility for coal dust that ended up on the plaintiff's property.¹¹³ Notably, the defendant conceded that the coal dust was a disposal of solid waste.¹¹⁴ Ultimately, the plaintiff's RCRA claim was rejected by the court for lack of an imminent and substantial endangerment.¹¹⁵ Had that element been satisfied, the defendant's concession that the dust was a solid waste disposal likely would have enabled the plaintiff to use the RCRA citizen suit provision to address a harm that the CAA could not.¹¹⁶

In a second case, *United States v. Power Engineering Co.*,¹¹⁷ the Tenth Circuit accepted that a "mist" of hexavalent chromium could constitute a disposal for RCRA purposes.¹¹⁸ The court below described the mist as a "suspended liquid" that came within RCRA's definition of a "solid waste."¹¹⁹

The debate over particulate matter for RCRA suits remains an open question. While the Ninth Circuit strongly pushes one way, these other courts militate in the other direction, leaving the majority of circuits and districts without an answer.

2. Cases Concerning Gaseous Matter

Unlike particulate matter, whether gaseous matter is a "solid waste" is less open for debate. Several courts have focused specifically on the inclusion of "contained gaseous material" in the solid waste definition,¹²⁰ and even the EPA has admitted that RCRA's solid waste definition does not apply to uncontained gaseous material.¹²¹ These cases generally point to the fact that RCRA, as presently written, does not allow litigation to enjoin gaseous emissions. Therefore, a legislative change may be necessary to make such abatement possible.

The EPA has considered if it can regulate uncontained gases, and the conclusion has consistently been no. In 1989, the EPA stated, "the Agency now believes that our authority under RCRA is limited to the regulation of only

113. No. 06 C 50080, 07 C 5007, 2009 WL 10700262, at *1 (N.D. Ill. Sept. 11, 2009).

114. *McEvoy*, 2009 WL 10700262, at *10.

115. *Id.* at *11.

116. *See id.* at *11, *15.

117. 191 F.3d 1224 (10th Cir. 1999).

118. *Power Eng'g*, 191 F.3d at 1231.

119. *United States v. Power Eng'g Co.*, 10 F. Supp. 2d 1145, 1158 (D. Colo. 1998). While the case concerned a suit by the EPA, and not a citizen suit, *see id.* at 1146, its interpretation of the statutory language is still relevant and persuasive here.

120. 42 U.S.C. § 6903(27).

121. *See infra* notes 122–124, 126 and accompanying text. There is one federal district court case going the other way; however, its persuasive authority is undermined by the fact that it did not consider the EPA's statements on the issue, in addition to many courts coming out differently.

containerized or condensed gases.”¹²² This was reiterated in 2014, when the EPA considered whether supercritical fluids were “solid waste” within RCRA’s definition.¹²³ The EPA noted that supercritical fluid was different than contained gaseous material, which was specifically mentioned within the statute.¹²⁴ While it is important to keep in mind that the statutory definition of solid waste is broader than the regulatory definition, the fact that the EPA has come to this conclusion is persuasive. In *Northern Illinois Gas Co. v. City of Evanston*, a city brought suit against two natural gas companies under RCRA based on the allegation that their pipeline leak constituted an improper disposal of “solid waste.”¹²⁵ Among other things, the court noted that in a 2014 brief filed by the EPA before the D.C. Circuit, the agency acknowledged that the specific inclusion of “contained” gases in the solid waste definition showed a congressional intent to exclude uncontained gases—the interpretive canon of *expressio unius* suggests that uncontained gases cannot be solid wastes.¹²⁶

Similarly, a different federal district court found that coke oven gas that leaked from a pipe was “discarded,” however, it was not a solid waste because the plain language of the statute excludes uncontained gases.¹²⁷ And the Fifth Circuit also has a reported case where it assumed, as an initial matter, that in order for a gas to be a “solid waste,” it must necessarily be “contained.”¹²⁸ The main case cutting in the opposite direction is *Citizens Against Pollution v. Ohio Power*.¹²⁹ The court stated that because the flue gas at issue was discarded, and solid waste includes “other discarded material, including solid, liquid, semisolid, or contained gaseous material,” the court therefore did not need to consider what the gas was, because the list was illustrative, and the gas was already determined to be discarded.¹³⁰ While this case is a strong assertion of the argument that gases are solid wastes for the RCRA citizen suit provision, it is undermined by the fact that it did not consider the EPA’s statements (and

122. Hazardous Waste Management System; Identification and Listing of Hazardous Waste CERCLA Hazardous Substance Designation; Reportable Quantity Adjustment, 54 Fed. Reg. 50968, 50970 (Dec. 11, 1989) (codified at 7 C.F.R. pts. 261, 271, 302).

123. Hazardous Waste Management System: Conditional Exclusion for Carbon Dioxide (CO₂) Streams in Geological Sequestration Activities, 79 Fed. Reg. 350, 354–55 (Jan. 3, 2014) (codified at 40 C.F.R. pts. 9. 260, 261).

124. *Id.* at 355.

125. 162 F. Supp. 3d 654, 656 (N.D. Ill. 2016).

126. *N. Ill. Gas Co.*, 162 F. Supp. 3d at 662 (citing Brief for Respondents at 21, 57–58, Carbon Sequestration Council v. EPA, 787 F.3d 1129 (D.C. Cir. 2015) (No. 14-1046), 2014 WL 5830427). The court in *City of Evanston* concluded that the methane leaking from the natural gas pipeline was not a solid waste. *Id.* at 658–63.

127. *Helter v. AK Steel Corp.*, No. C-1-96-527, 1997 WL 34703718, at *12 (S.D. Ohio Mar. 31, 1997).

128. *United States v. Sims Bros. Constr.*, 277 F.3d 734, 740 (5th Cir. 2001) (quoting 42 U.S.C. § 6903(27)).

129. No. C2-04-CV-371, 2006 WL 6870564 (S.D. Ohio July 13, 2006).

130. *Citizens Against Pollution*, 2006 WL 6870564, at *5 (emphasis omitted) (quoting 42 U.S.C. § 6903(27)).

it was decided years prior to some of the EPA's statements, so it could not have considered them), and it does not contemplate the *expressio unius* argument, which in this context seems particularly strong—it would be odd for Congress to have intended “all gases,” and then explicitly only state “contained gases” in its list, no matter how illustrative the list was intended.

IV. PROPOSED SOLUTIONS

From the discussion above, it seems that courts are, at the very least, hostile to treating gaseous emissions as “solid waste” for RCRA purposes. But in most jurisdictions, particulate matter is still an open question subject to future litigation. This Part discusses some possible arguments in favor of using RCRA's imminent and substantial endangerment (ISE) suits in litigation against emissions of harmful particulate pollution and also proposes a legislative fix that could avoid the resulting incongruity from allowing only particulate matter to be the target of a RCRA suit. Before discussing these changes in detail, it is important to address two questions: Why favor citizen suit litigation as opposed to a more regulatory approach? And why use the RCRA citizen suit provision when the CAA has its own citizen suit provision? Each of these will be answered in turn.

First, it is necessary to discuss why a solution to some of the gaps in the CAA should involve expanding citizen suits rather than changing the regulatory structure. For one, RCRA's ISE provision is strong medicine: it provides for retroactive liability,¹³¹ as well as an award of attorney's fees and costs.¹³² Moreover, under the Federal Rules of Civil Procedure, courts will sometimes appoint a “Special Master” to oversee remediation and compliance at the cost of the defendant.¹³³ While there can be no question that government regulation is an essential feature of environmental law, litigation has a unique way of allowing communities and individuals, often those harmed most, to seek justice beyond what a complex regulatory framework can deliver.¹³⁴

Environmental citizen suits disrupt the traditional model of the regulatory state, which treats regulation as a matter between the regulator and the regulated entity, by introducing a third party that circumvents the problem of “agency capture.”¹³⁵ Expansion of the citizen suit provision in RCRA is one

131. Petropoulos v. Columbia Gas of Ohio, Inc., 840 F. Supp. 511, 515 (S.D. Ohio 1993).

132. See Interfaith Cmty. Org. v. Honeywell Int'l, Inc., 263 F. Supp. 2d 796, 843 (D.N.J. 2003), *aff'd*, 399 F.3d 248 (3d Cir. 2005).

133. See *id.* at 834 (appointing a Special Master in an ISE case where the defendant had engaged in “regulatory ping-pong”).

134. See ODAY SALIM, GREAT LAKES ENV'T L. CTR., FLINT WATER CRISIS TESTIMONY (2016), <https://www.michigan.gov/-/media/Project/Websites/mdcr/mcra/testimony/salim-redacted.pdf> [perma.cc/4QWA-3DLL] (“Without . . . citizen litigation tools, it is difficult to remedy past harms or future harms that will inevitably slip through the cracks of even an improved pre-decision process.”).

135. See Karl S. Coplan, *Citizen Litigants Citizen Regulators: Four Cases Where Citizen Suits Drove Development of Clean Water Law*, 25 COLO. NAT. RES., ENERGY & ENV'T L. REV. 61, 74–75 (2014). “Agency capture” describes the problem where agencies become controlled by the

way of ensuring that environmental policy is community led. This concern is also a good reason to favor citizen suits instead of suits by the EPA or some other actor in the system.¹³⁶ A community that is currently experiencing harm should be able to find a remedy, regardless of who occupies the White House.¹³⁷ For example, in 2018, EPA Administrator Andrew Wheeler disbanded a panel of the Clean Air Scientific Advisory Committee consisting of experts in epidemiology, toxicology, medicine, and other fields.¹³⁸ This panel traditionally reported findings to the EPA to help update air quality standards; at the time they were disbanded, they were updating existing particulate pollution standards, which were found to be “not protective of public health.”¹³⁹ Expansion of the citizen suit provision is a simple judicial avenue that allows communities to speak for themselves when harm occurs, rather than relying on a complex regulatory framework that sits under the constant specter of deregulation. While simple solutions in all areas of environmental law may not be appropriate to account for unique industries, pollutants, and harms, a simple solution in this circumstance is a reasonable way of preventing and remedying harms whenever and wherever they occur.

Second, assuming that expanding the avenues of litigation for communities is a better solution than expanding the regulatory reach of the government, it is worth asking: why focus on the RCRA citizen suit provision rather than the CAA citizen suit provision? The simple answer is that the current CAA citizen suit provision has no ISE provision.¹⁴⁰ In order to target particulate matter pollution that does not violate CAA standards or regulations, the Act would need to be amended. The EPA has emergency power under the

industries they regulate because of their close associations and “revolving door” employment relationships. *See id.* at 75; *see also* David L. Noll, *Administrative Sabotage*, 120 MICH. L. REV. 753, 824 (2022) (“[D]elegating authority to agencies does not only create risks that they will exceed their statutory authority, . . . [i]t also creates a risk that agencies will attempt to kill or nullify the very programs they administer.”).

136. *See* 42 U.S.C. § 6972.

137. *See* Joseph Goffman & Laura Bloomer, *Disempowering the EPA: How Statutory Interpretation of the Clean Air Act Serves the Trump Administration’s Deregulatory Agenda*, 70 CASE W. RESV. L. REV. 929, 930–31 (2020) (“The Trump EPA is working to change the Agency’s progressive trajectory through a series of rule rollbacks based on interpretations of the CAA that narrow the Agency’s legal authority. The EPA is no longer conducting rigorous empirical analyses to understand and solve air-quality problems; instead, it is interpreting the CAA to establish that it lacks the authority to act.”); *see also* Samantha Gross, *What Is the Trump Administration’s Track Record on the Environment?*, BROOKINGS: POLICY 2020 (Aug. 4, 2020), <https://www.brookings.edu/policy2020/votervital/what-is-the-trump-administrations-track-record-on-the-environment> [perma.cc/V74Z-L5V9].

138. H. Christopher Frey, *The EPA Disbanded Our Clean Air Science Panel. We Met Anyway—and Found That Particle Pollution Regulations Aren’t Protecting Public Health*, CONVERSATION (Oct. 29, 2019, 8:58 AM), <https://theconversation.com/the-epa-disbanded-our-clean-air-science-panel-we-met-anyway-and-found-that-particle-pollution-regulations-arent-protecting-public-health-125779> [perma.cc/3DW7-N52F].

139. *Id.*

140. *See* 42 U.S.C. § 7604.

CAA to bring suit and restrain air emissions that are “an imminent and substantial endangerment to public health or welfare, or the environment,”¹⁴¹ but this power is discretionary¹⁴² and therefore subject to agency capture.¹⁴³ The RCRA citizen suit provision, as this Note argues, would not need to be amended in order to target particulate matter.

This Note also proposes a legislative solution for the second problem: nonsolid waste. So why only focus on RCRA here rather than the CAA citizen suit provision? In some cases, the alleged endangerment might involve both solid waste and gas. In the hexavalent chromium case discussed in Section III.C, for example, the facility was discharging a contaminated mist, but its air scrubbers were also leaking a “yellow/orange liquid” down the side of the building into the soil below.¹⁴⁴ While the CAA defines air pollutants broadly, one would be hard pressed to argue that liquid running down the side of the building would be an air pollutant as defined by the Act, even if there were an ISE provision that allowed suit when air pollutants were causing an endangerment.¹⁴⁵ This means that litigants would need to plead two kinds of claims in mixed-matter cases; however, if RCRA is amended to include gaseous matter, then only one claim need be pursued. It might be argued that the CAA could borrow the definition of “solid waste” from RCRA and look to RCRA case law¹⁴⁶ in adjudicating a new ISE provision in the CAA. But this feels unnecessary because RCRA already has an ISE provision that works, and a slight expansion could make it work even better. The following two sections describe how the ISE citizen suit provision could work better—first, starting today, with how litigants can argue that ISE applies to particulate matter, and then, considering what Congress could do in the future to expand protection for communities.

A. Attempting More ISE Suits in PM Cases

Communities that have been harmed by particulate matter pollution should continue to bring (and bring more) ISE citizen suits. Most courts have not resolved this issue, but there are strong textual, structural, historical, and

141. *Id.* § 7603.

142. *Hassig v. EPA*, No. 02-1001, 2002 WL 1364297, at *1 (D.C. Cir. May 24, 2002); *see* 42 U.S.C. § 7603 (“[T]he Administrator . . . may bring suit on behalf of the United States . . .”) (emphasis added); *id.* § 7604(a) (“[A]ny person may commence a civil action . . . against the Administrator where there is alleged a failure of the Administrator to perform any act or duty under this chapter which is not discretionary . . .”) (emphasis added).

143. *See supra* notes 134–135 and accompanying text.

144. *United States v. Power Eng’g Co.*, 10 F. Supp. 2d 1145, 1150–51 (D. Colo. 1998), *aff’d*, 191 F.3d 1224 (10th Cir. 1999).

145. *See* 42 U.S.C. § 7602(g).

146. Numerous federal courts have considered what constitutes imminent and substantial endangerment under RCRA. *See, e.g., Meghrig v. KFC W., Inc.*, 516 U.S. 479, 485–86 (1996); *Cordiano v. Metacon Gun Club, Inc.*, 575 F.3d 199, 211–12 (2d Cir. 2009); *Burlington N. & Santa Fe Ry. Co. v. Grant*, 505 F.3d 1013, 1022 (10th Cir. 2007).

policy reasons to support the conclusion that emissions of particulate matter are disposals of solid waste under the statute.¹⁴⁷ Textually, particulate matter is a solid, and when it is released into the air with no intent of future use, that is a disposal. Structurally, section 6972(a)(1)(B) must be read as distinct from section 6972(a)(1)(A), particularly given the disjunctive “or” separating the provisions. Historically, Congress has evidenced an interest in filling CAA gaps using RCRA remedies (in the 1984 amendments).¹⁴⁸ And from a policy perspective, there are many reasons to help communities take polluters into court to prevent and remediate harm where those communities would otherwise be left without a remedy.¹⁴⁹ The only issue left is to build the precedent that clearly establishes that ISE suits apply to particulate matter. In this venture, a lone panel of the Ninth Circuit should not pose an obstacle.

The Ninth Circuit opinion in *Center for Community Action*, as well as the holding of the court below, is wrong for three major reasons. First, the court essentially held that ‘RCRA is land, CAA is air,’ and the two must never overlap. After considering the history of RCRA and the CAA, the court concluded: “The statutory and legislative histories . . . make clear that RCRA, in light of its purpose to reduce the volume of waste that ends up in our nation’s landfills, governs ‘land disposal.’”¹⁵⁰ The court conspicuously never cites *Remington Arms*, which held that the ISE provision can apply to water disposal, not just land disposal,¹⁵¹ and it brushes aside any instance in which RCRA has been applied outside of the “land” context. The Ninth Circuit assumed that because Congress chose not to regulate railyards under the CAA, it must therefore have been thinking about RCRA at the same time.¹⁵² This approach is contrary to the plain wording of the statute, which says that “any person” can be sued,

147. See Anuj C. Desai, *Text Is Not Enough*, 93 U. COLO. L. REV. 1, 3 (2022) (“[I]n difficult, contested cases, statutory interpretation is unavoidably a multimodal enterprise that involves consideration of, at least, text, semantic context, statutory purpose, history (statutory, legislative, social, and political), social context, precedent, moral judgment, and consequentialist reasoning.”); see also PHILIP BOBBITT, *CONSTITUTIONAL FATE* 7–8 (1982) (discussing five general types of constitutional argument).

148. See *supra* notes 104–105 and accompanying text.

149. Clean air, for those only thinking from a cost perspective, is also generally well worth it. Analysis of the CAA has shown that the benefits of clean air are thirty-two times the cost of regulation, and annually the Act prevents up to 370,000 premature deaths and creates up to \$3.8 trillion in net economic benefits. Simon Mui & Amanda Levin, *Clearing the Air: The Benefits of the Clean Air Act*, NRDC (May 5, 2020), <https://www.nrdc.org/resources/clean-air-acts-benefits-map> [perma.cc/PZ9Z-JZ54].

150. *Ctr. for Cmty. Action & Env’t Just. v. BNSF Ry. Co.*, 764 F.3d 1019, 1029 (9th Cir. 2014).

151. *Conn. Coastal Fishermen’s Ass’n v. Remington Arms Co.*, 989 F.2d 1305, 1308–1309 (2d Cir. 1993).

152. *Ctr. for Cmty. Action*, 764 F.3d at 1029–30 (“[T]he emissions that Congress intended to be governed by the newly enacted RCRA provision were also, at that time, governed by the Clean Air Act. Defendants’ railyards, however, as indirect sources, fell outside the scope of the Clean Air Act, and therefore must also be excluded from RCRA’s regulatory reach.”).

not any person regulated elsewhere under this statute.¹⁵³ This is why the gun club in *Remington Arms*, which was not regulated under RCRA, could be sued. The touchstone is imminent and substantial endangerment, not whether the party's conduct is regulated by the statute—that is why (a)(1)(A) and (a)(1)(B) are separate provisions.

Second, the court concluded that emission of DPM is not a “disposal” in the context of a RCRA citizen suit.¹⁵⁴ A “disposal” includes discharging, depositing, injecting, dumping, spilling, leaking, and placing; from this, the court remarks, “We note first that RCRA’s definition of ‘disposal’ does not include the act of ‘emitting.’”¹⁵⁵ The court, again rather conspicuously, never cites the definitions of any of the words in the statute.¹⁵⁶ For example, one of the words in the list, discharge, has the following possible definition: “give outlet or vent to,” or “emit,” as in “vehicles *discharging* exhaust fumes.”¹⁵⁷ Emit—the word the court felt would be necessary in order to make a finding of a disposal—means “to throw or give off or out” and includes the listed synonym: “discharge.”¹⁵⁸ Or consider another word on the list, “leak,” which means “to enter or escape through an opening usually by a fault or mistake” (as in, “fumes *leak* in”).¹⁵⁹ If a filter could limit the discharge of DPM from older locomotives, but the filter broke and some of the DPM slipped through—or as some might say, “leaked”—should that really change the analysis of the court here? Is a *mens rea* required in order for something to be a leak versus a mere emission? The interpretation of the statute in this portion of the opinion is remarkably strained.¹⁶⁰ The word disposal should take on its plain and ordinary meaning—discarded, that is, the “grave” part of “cradle-to-grave,”¹⁶¹ regardless of if that grave is in the soil, the bottom of a lake, or the sky.

153. 42 U.S.C. § 6972(a)(1)(B) (emphasis added).

154. *Ctr. for Cmty. Action*, 764 F.3d at 1025–26.

155. *Id.* at 1024.

156. *Cf.* *United States v. Alvarez-Sanchez*, 511 U.S. 350, 357 (1994) (stating that where a word is not defined by statute, courts should construe the term to its ordinary and natural meaning).

157. *Discharge*, MERRIAM-WEBSTER, <https://www.merriam-webster.com/dictionary/discharge> [perma.cc/9HTS-X58Q]; *see also* *Meghriq v. KFC W., Inc.*, 516 U.S. 479, 485–86 (1996) (using Webster’s Dictionary to understand and define the term “imminent” in the RCRA citizen suit provision).

158. *Emit*, MERRIAM-WEBSTER, <https://www.merriam-webster.com/dictionary/emit> [perma.cc/2VXY-5ZQL].

159. *Leak*, MERRIAM-WEBSTER, <https://www.merriam-webster.com/dictionary/leak> [perma.cc/6JYT-9FVY].

160. *See also* Recent Case, *Center for Community Action & Environmental Justice v. BNSF Railway Co.*, 764 F.3d 1019 (9th Cir. 2014), 128 HARV. L. REV. 1272, 1276 (2015) (“Future courts should avoid the negative consequences of the [Ninth Circuit’s] bright-line order-of-disposal rule by relying on an individualized inquiry into the nature of each alleged disposal.”).

161. “Cradle-to-grave” is a frequently used term to describe the aims of the RCRA statute. *See, e.g., City of Chicago v. Env’t Def. Fund*, 511 U.S. 328, 331 (1994); *Shell Oil Co. v. EPA*, 950 F.2d 741, 745 (D.C. Cir. 1991).

Third, and finally, while the Ninth Circuit did not rely on the lower court's finding that DPM was not a "solid waste," it did not disturb this holding either.¹⁶² It is important to understand why the lower court was wrong in reaching such an outcome. The lower court, at the motion to dismiss stage, claimed that "[u]nder [p]laintiffs' proposed definition of solid waste, any gas containing compounds, regardless of size, that can be aggregated to form a solid or liquid substance would qualify as a solid waste under RCRA," and the court continued to treat particulate matter as though it were a gas.¹⁶³ This evidences a tenuous grasp on the underlying science, and it is notable that the court never cites any scientific treatises or textbooks for its plain and sweeping conclusion that all particulate matter must be gas because it floats in gas. Even from a legal perspective, this is wrong. Many state statutory and administrative codes start with the proposition that particulate matter is a liquid or a solid—not a gas.¹⁶⁴ This is also how the EPA defines particulate matter.¹⁶⁵ And states, as well as the EPA, have developed methods to determine the difference between particulate matter and gaseous material.¹⁶⁶

If the arguments above are not convincing enough to reject the Ninth Circuit's interpretation, consider one more question: what is the difference between coal ash blown off of a dump by the wind and coal ash emanating from a smokestack? In *Citizens Coal Council*, for example, the defendants owned a coal ash pile that would frequently blow ash into nearby streams and onto cars and houses,¹⁶⁷ and the court concluded that this was solid waste subject to an ISE suit.¹⁶⁸ The plaintiffs in *Center for Community Action* made a similar argument: why would a leak of toxic sludge be a disposal, but not so if a worker

162. See *Ctr. for Cmty. Action & Env't Just. v. BNSF Ry. Co.*, 764 F.3d 1019, 1030 n.10 (9th Cir. 2014).

163. *Ctr. for Cmty. Action & Env't Just. v. Union Pac. Corp.*, No. CV 11-08608, 2012 WL 2086603, at *7-9 (C.D. Cal. May 29, 2012).

164. See, e.g., MICH. COMP. LAWS § 324.5525(f) (LexisNexis 2014) ("'Particulate' means any air contaminant existing as a finely divided liquid or solid . . ."); 9 VA. ADMIN. CODE 5-10-20 (2017) ("'Particulate matter' means any airborne finely divided solid or liquid material with an aerodynamic diameter smaller than 100 micrometers."); CONN. AGENCIES REGS. § 22a-174-1(88) (2021) ("'Particulate matter' or 'PM' means any material, except water in uncombined form that is or has been airborne and exists as a liquid or a solid in the ambient air."); 020-0002-1 WYO. CODE R. § 3(a) (LexisNexis 2013) ("'Particulate matter' shall mean any airborne finely divided solid or liquid material with an aerodynamic diameter smaller than 100 micrometers."); NEV. ADMIN. CODE § 445B.129 (2018) ("'Particulate matter' means any material except uncombined water that exists in a finely divided form as a liquid or solid at reference conditions.").

165. See *supra* note 1 and accompanying text.

166. See, e.g., 40 C.F.R. pt. 60, App. A-1; MICH. ADMIN. CODE r. 336.2004(5) (2009) (listing five tests for determining particulate emissions rates); ILL. ADMIN. CODE tit. 35, § 212.110 (1996) (deferring to the federal regulations for measurement tests).

167. *Citizens Coal Council v. Matt Canestrone Contracting, Inc.*, 51 F. Supp. 3d 593, 598-99, 611 (W.D. Pa. 2014).

168. *Id.* at 611.

uses a shovel to fling the sludge over their fence?¹⁶⁹ Much like in *DuPont*, where the court understood that groundwater contamination caused by air emissions versus dumping was “a distinction without a difference,”¹⁷⁰ the distinction between particle emissions into the air and particle movement from one location to another seems similarly irrelevant. Twisting the language of the ISE provision to help polluters escape liability is an unsustainable and unprincipled venture.

The *DuPont* court distinguished its holding from that of the Ninth Circuit in *Center for Community Action* because DPM “fell onto the land, and then was swept back up into the air, causing harm to those who inhaled it. In contrast, . . . solid C8 particles are emitted into the air, fall onto the ground, remain there, and then contaminate the soil and groundwater.”¹⁷¹ Courts need not think so narrowly. The statutory definition of “disposal” includes placing solid waste “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 waters.”¹⁷² To the *DuPont* court’s credit, “disposal” does include placing waste into groundwater—directly relevant to C8—but it also includes placing waste where it will enter the environment or be emitted into the air. This Note agrees with the *DuPont* court insofar as it was willing to recognize that aerial emissions of pollutants can be the subject of RCRA suits. However, this Note goes one step further to argue that DPM and other pollutants that fall to the ground and are swept back into the air “enter the environment,” as courts have broadly interpreted that phrase.¹⁷³ From 1967 to 2012, toxic coal ash caused \$2.3 billion in damage to fish and wildlife.¹⁷⁴ If particulate matter is not entering the environment, then what is it doing?

The remedies in these kinds of cases will often be very reasonable. On construction sites, it is possible to limit the DPM emissions by limiting unnecessary idling of diesel engines or restricting the amount of diesel-powered

169. See Appellants’ Reply Brief at 5–6, *Ctr. for Cmty. Action & Env’t Just. v. BNSF Ry. Co.*, 764 F.3d 1019 (9th Cir. 2014), 2013 WL 663903.

170. *Little Hocking Water Ass’n v. E.I. Du Pont de Nemours & Co.*, 91 F. Supp. 3d 940, 947 (S.D. Ohio 2015) (footnote omitted).

171. *Id.*

172. 42 U.S.C. § 6903(3).

173. See *Voggenthaler v. Md. Square LLC*, 724 F.3d 1050, 1064 (9th Cir. 2013) (“Because the phrase ‘enter the environment’ is qualified by the word ‘may’ in the definition of ‘disposal,’ the statute cannot be interpreted to cover only spills that go directly and immediately into the groundwater. The statute contemplates that some spills may never enter the environment.” (quoting 42 U.S.C. § 6903(3))); *Cooper Indus., Inc. v. Agway, Inc.*, No. 92-CV-0748, 1996 WL 550128 (N.D.N.Y. Sept. 23, 1996) (finding that where a substance was discovered in the soil, it had entered the environment); cf. *3550 Stevens Creek Assocs. v. Barclays Bank of Cal.*, 915 F.2d 1355 (9th Cir. 1990) (concluding that asbestos, even when it becomes friable, does not “enter the environment” because it remains contained within the building).

174. A. Dennis Lemly & Joseph P. Skorupa, *Wildlife and the Coal Waste Policy Debate: Proposed Rules for Coal Waste Disposal Ignore Lessons from 45 Years of Wildlife Poisoning*, 46 ENV’T SCI. & TECH. 8595 (2012).

equipment in a given area.¹⁷⁵ Another easy solution: consider environmental justice when deciding where railyards will be built.¹⁷⁶ In recent years, new railyards (a significant source of particulate matter pollution)¹⁷⁷ have been proposed, constructed, or expanded in the Englewood neighborhood of Chicago, near an elementary school in Alabama, and in a residential community in Baltimore.¹⁷⁸ It does not have to be this way. Communities should have a way to protect themselves when particle pollution is not above the regulatory limit but bad enough to cause cancer and cut lives short.

Litigants should continue to bring and test these kinds of claims. So far, very few cases have been brought under the RCRA citizen suit provision, and an overwhelming majority of circuit and district courts have not yet had the chance to weigh in. Applying the RCRA citizen suit in this way would fix major problems with the CAA, avoid complex regulatory solutions, and promote a precautionary principle of harm elimination that seeks to prevent imminent and substantial endangerment to health or the environment.

B. Amending the RCRA Citizen Suit Provision

From the discussion above of the CAA gaps, and application of RCRA to gaseous matter, two things are certain: (1) courts may hesitate to apply the RCRA citizen suit to gaseous material under existing law, and (2) the Title V permit shields still sanction a significant amount of harm. Litigation alone cannot solve these problems, but they could be resolved by changes to the RCRA citizen suit provision. The following changes to subsection (a)(1)(B) of RCRA's citizen suit provision, 42 U.S.C. § 6972, would address both of these concerns:

against any person, including the United States and any other governmental instrumentality or agency, to the extent permitted by the eleventh amendment to the Constitution, and including any past or present generator, past or present transporter, or past or present owner or operator of a treatment, storage, or disposal facility, *regardless of possession of a permit pursuant to 42 U.S.C. § 7661 et seq.*, who has contributed or who is contributing to the past or present handling, storage, treatment, transportation, or disposal of any solid, *uncontained gaseous*, or hazardous waste which may present an imminent and substantial endangerment to health or the environment . . .

The first change highlighted above specifically denies a defense on the basis of a permit shield under the relevant CAA provision. The second change is an intentional rebuke to the *expressio unius* argument accepted by some

175. OSHA, DIESEL EXHAUST, *supra* note 49, at 2.

176. Andrea Hricko et al., *Global Trade, Local Impacts: Lessons from California on Health Impacts and Environmental Justice Concerns for Residents Living near Freight Rail Yards*, 11 INT'L J. ENV'T RSCH. & PUB. HEALTH 1914, 1934 (2014).

177. See *supra* notes 49–51 and accompanying text.

178. Hricko, *supra* note 176, at 1931.

courts.¹⁷⁹ While the definition of solid waste in RCRA would only include contained gases,¹⁸⁰ the revised ISE provision would make clear that “contained” is no longer a limit on harmful gaseous emissions. At the same time, this proposal does not amend the definition of solid waste to avoid upsetting the rest of the statutory and regulatory structure that relies on that definition.¹⁸¹

This proposal would both care for the fact that gaseous pollution harms communities just as much as particulate matter and would also prevent harm from air pollution facilities regardless of their permitting status. There is one notable drawback to this change: pollution emitters could always obtain RCRA permits, which would be immune from the citizen suit provision.¹⁸² The RCRA permit shield has been interpreted broadly by federal courts, and attempts to use the RCRA citizen suit provision are generally considered improper collateral attacks on permitting decisions.¹⁸³ The natural response to this would be to amend the law so that the RCRA permit shield does not pose a bar to a citizen suit. But this approach would create an exception that could swallow the rule. There would be a dramatic disincentive for those disposing of solid waste to work outside the confines of RCRA’s regulatory structure, as they would know that they would be subject to citizen suit regardless of if they obtained a permit or not, provided they were causing an imminent and substantial endangerment. While RCRA permits will not be perfect, they will provide an added layer of protection beyond the Title V permits already required under the CAA.¹⁸⁴ Therefore, this Note suggests the more modest approach, allowing RCRA citizen suits to only circumvent CAA permit shields. Certainly, polluters would need to ask, “is what is coming out of our smokestack going to cause an imminent and substantial harm to the surrounding community?” But the fact that they were not asking that question before is not a compelling reason to avoid implementing this change. Decades of apathy should not justify continuing harm.

Absent a legislative fix, something of an additional gap would be created—where plaintiffs could bring RCRA citizen suits against the railyard or coal power plant, but not the methane emitting natural gas facility across the street. Adding a few words to the statute would give people the chance to reduce harmful air pollution through litigation without imposing additional regulatory requirements that will often allow some harms to slip through the cracks.

179. See *supra* note 126 and accompanying text.

180. 42 U.S.C. § 6903(27).

181. See, e.g., *id.* § 7546(a)(1); 49 U.S.C. § 60128(b); 33 C.F.R. § 151.1006(4).

182. 42 U.S.C. § 6976.

183. See, e.g., *Greenpeace, Inc. v. Waste Techs. Indus.*, 9 F.3d 1174, 1178–82 (6th Cir. 1993).

184. And, it should be noted, getting a RCRA permit is not exactly easy. See *id.* at 1179 (“[T]he RCRA permitting process looks something like the organizational chart of the Prussian army, with no less than twenty-six notable loci of decision.” (citation omitted)).

CONCLUSION

This Note presents two possible solutions to tackle the problem of harmful particulate air pollution—one through litigation, which is rarely attempted in the federal courts and notably absent from legal literature, and the other through legislative amendment.

While using a statute that was written against the backdrop of hazardous land waste to regulate pollutants in the air is unconventional, it is reasonable in light of the text, history, structure, and policy of the law. Some might argue that this approach will clog the courts and provoke costly litigation. This may be true, to some extent, as the expansion of any private right of action will likely expand the number of people who will invoke that right. The required analysis, however, is one of competing harms.

Spikes in cancer, respiratory illness, childhood asthma, and any number of other health harms (to say nothing of ecological harms) are not worth the marginal benefit of keeping a few more cases out of the court system. If we want a national environmental policy that works for all people, including communities of color and poor communities, then we must recognize that expanding access to the courts for people to bring claims, enjoin polluters, and prevent substantial harm to their neighborhoods is necessary. Expanding the scope of the RCRA citizen suit provision is not the only way to do that, but it is certainly one worth considering.