NO. 19-71930

IN THE UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

IN RE A COMMUNITY VOICE; CALIFORNIA COMMUNITIES AGAINST TOXICS; HEALTHY HOMES COLLABORATIVE; NEW JERSEY CITIZEN ACTION; NEW YORK CITY COALITION TO END LEAD POISONING SIERRA CLUB; UNITED PARENTS AGAINST LEAD NATIONAL; and WE ACT FOR ENVIRONMENTAL JUSTICE,

Petitioners,

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY and ANDREW WHEELER, Administrator,

Respondents.

ON PETITION FOR REVIEW OF A FINAL RULE
OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY

BRIEF *AMICI CURIAE* OF THE AMERICAN ACADEMY OF PEDIATRICS, THE AMERICAN PUBLIC HEALTH ASSOCIATION, THE NATIONAL ASSOCIATION OF COUNTY AND CITY HEALTH OFFICIALS, THE NETWORK FOR PUBLIC HEALTH LAW, AND DR. BRUCE LANPHEAR IN SUPPORT OF PETITIONERS

EMILY A. BENFER
HEALTH JUSTICE ADVOCACY CLINIC,
Morningside Heights Legal Services, Inc.
Columbia Law School
435 West 116th Street
New York, NY 10027
Telephone: (212) 854-4291
Facsimile: (212) 854.3554
Email: emily.benfer@law.columbia.edu

Counsel for Proposed Amici Curiae

Legal Interns:
Katherine Donohue
Michelle Lappen

TABLE OF CONTENTS

TABLE OF AUTHORITIES ..... **iii**

IDENTITY AND INTEREST OF AMICI CURIAE **1**

INTRODUCTION **3**

SUMMARY OF ARGUMENT **5**

ARGUMENT **8**

I. THE CHALLENGED RULE IS INCONSISTENT WITH MODERN SCIENCE, PLACING CHILDREN AT RISK OF LEAD POISONING AND PERMANENT BRAIN DAMAGE 8

A. EPA's adoption of outdated dust lead levels disregards current science and the CDC's surveillance data and consequent recommendations related to blood lead levels requiring intervention. 10

B. EPA's failure to update the definition of lead-based paint to reflect scientific standards places occupants in danger of lead exposure. 13

C. EPA's adopted soil-lead standards contravene current science and disregard the CDC's blood lead reference level. 16

II. CLEARANCE LEVELS SHOULD BE REVISED TO ENSURE THE SAFETY OF OCCUPANTS AFTER REMEDIATION AND ABATEMENT ACTIVITIES 21

A. The challenged rule creates a loophole that allows higher levels of lead to remain undetected after abatement. 22

B. The challenged rule misrepresents the availability of key scientific studies and waiting for additional research continues undue delay. 23

III. OUTCOME OF LETTING THE RULE STAND 24

A. The current rule will have a disproportionate effect on low-income and minority children. 24

B. Other federal agencies that adopt EPA's lead hazard standards in their own lead poisoning prevention programs rely on EPA to set scientifically supported standards. 26

C. Numerous states currently trust EPA to adopt lead hazards standards that reflect current science. 27

D. The EPA's lead hazard standards create a false sense of safety that will result in unwitting exposure to lead based-paint health hazards. 28

CONCLUSION **29**

TABLE OF AUTHORITIES

CASES

A Community Voice v. EPA, 878 F.3d 779, 784 (9th Cir. 2017) 6, 13, 27, 28

STATUTES

15 U.S.C. § 2681.....5, 9
15 U.S.C. § 2685(d)(1)(G)-(I)..... 29

OTHER AUTHORITIES

Advisory Committee on Childhood Lead Poisoning Prevention of the CDC, Low Level Lead Exposure Harms Children: A Renewed Call for Primary Prevention (Jan. 2012)..... 18
American Academy of Pediatrics, Council on Environmental Health, *Policy Statement: Prevention of Childhood Lead Toxicity*, 138 PEDIATRICS 1, 5 (July 2016) .....passim
Anne Evens et al., *The impact of low-level lead toxicity on school performance among children in the Chicago Public Schools: a population-based retrospective cohort study*, 14 ENVTL. HEALTH 21 (2015)..... 8
APHA, *Public Health Code of Ethics* (2019) 22
Braun et al., *Effect of Residential Lead-Hazard Interventions on Childhood Blood Lead Concentrations and Neurobehavioral Outcomes: A Randomized Clinical Trial*, JAMA PEDIATRICS (2018)..... 21
Braun, et al., *A Randomized Controlled Trial to Reduce Childhood Lead Exposure and Lead-Associated Neurobehavioral Deficits*, JAMA PEDIATRICS (2018) 23
Bruce P. Lanphear et al., *Long-Term Effect of Dust Control on Blood Lead Concentrations*, 106 PEDIATRICS 4 (Oct. 2000)..... 23
Bruce P. Lanphear et al., *Low-Level Environmental Lead Exposure and Children's Intellectual Function: An International Pooled Analysis*, 113 ENVTL. HEALTH PERSP. 894 (2005)..... 8
Bruce P. Lanphear et al., *Low-level lead exposure and mortality in US adults: a population-based cohort study*, 3 LANCET PUB. HEALTH e177 (Apr. 2018)..... 23
Bruce P. Lanphear et al., *Screening Housing to Prevent Lead Toxicity in Children,* 120 PUB. HEALTH REP. 305, 310 (2005).....10, 12
Bruce P. Lanphear, Kim Dietrich, Peggy Auinger and Christopher Cox., *Cognitive Deficits Associated with Blood Lead Concentrations <10 μ/dL in US Children and Adolescents*, 115 PUB. HEALTH REP. 521 (2000) 8
CALIFORNIA DEP'T OF TOXIC SUBSTANCES CONTROL HUMAN AND ECOLOGICAL RISK OFFICE, HUMAN HEALTH RISK ASSESSMENT NOTE: 3, DTSC-MODIFIED SCREENING LEVELS (Apr. 2019)..... 19

CDC, *Blood Lead Levels in Children*, https://www.cdc.gov/nceh/lead/prevention/blood-lead-levels.htm (last visited Nov. 23, 2019).....5, 23
CDC, *Lead Poisoning Prevention*, https://www.cdc.gov/nceh/lead/prevention/blood-lead-levels.htm (last visited Oct. 26, 2019)..... 8
CDC, What Do Parents Need to Know to Protect Their Children?, https://www.cdc.gov/nceh/lead/acclpp/blood_lead_levels.htm (last updated May. 17, 2017) 18
Columbia Law School Health Justice Advocacy Clinic, *The Cost of Childhood Lead Poisoning in the United States of America*, 1 (2019)..... 3
Comments of American Academy of Pediatrics on Proposed Rule, EPA-HQ-OPPT-2018- 0166 (Aug. 16, 2018).....9, 14, 20, 21
Comments of Bruce Lanphear, M.D., M.P.H. on Proposed Rule, EPA-HQ-OPPT-2018- 0166 (Aug. 16, 2018).....8, 10, 20
Comments of Hannah Chang, Earthjustice on Proposed Rule, EPA-HQ-OPPT-2018-0166 (Aug. 16, 2018)..... 19
Contemporary Pediatrics, *Lead Poisoning: What's New About an Old Problem*? (2015)..... 6
Declaration of Bruce P. Lanphear, M.D., M.P.H. (Aug. 18, 2016), appended to the Petition for Writ of Mandamus 8
E. Jacobs et al., *The Prevalence of Lead-Based Paint Hazards in U.S.* Housing, 110 ENVT'L HEALTH PERSPECTIVES A599 (2002) 6, 13, 16
Economic Analysis of the Proposed Rule to Revise the TSCA Dust-Lead Hazard Standards (June 2018) 12
Emily A. Benfer, *Contaminated Childhood: How the United States Failed to Prevent the Chronic Lead Poisoning of Low-Income Children and Communities of Color*, 41 HARV. ENVTL. L. REV. 493, 495 (2017) 24, 25
EPA, *Steps to LEAD SAFE Renovation, Repair, and Painting* (2013)..... 21
EPA, *What You Need to Know About Lead Poisoning* (2014)..... 5
Exec. Order No. 12,898 24
Herbert L. Needleman, *Childhood Exposure to Lead: A Common Cause of School Failure*, 74 Phi Delta Kappa International 35, 36 (1994) 26
Howard Mielke, Chris Gonzales, Paul Mielke Jr., *The continuing impact of lead dust on children's blood lead: Comparison of public and private properties in New Orleans*, 111 (8) ENVTL. RESEARCH 1164, 1165 (2011) 20, 25
Howard Mielke, Christopher Gonzales, Eric Powell, and Paul Mielke Jr, *Urban soil-lead (Pb) footprint: retrospective comparison of public and private properties in New Orleans*, 30 (3) ENVTL. GOCHEMISTRY AND HEALTH 231, 232 (2007).....17, 18

Howard Mielke, Christopher Gonzales, Eric Powell, Paul Mielke, *Environmental and health disparities in residential communities of New Orleans: The need for soil intervention to advance primary prevention*, 51 ENVTL. INT'L 73, 79 (2013) 18, 19, 20
Howard Mielke, Mark Laidlaw, and Chris Gonzales, *Estimation of leaded (pb) gasoline's continuing material and health impacts on 90 US urbanized areas*, 37 (1) ENVTL. INT'L 248, 249 (2011) .....passim
HUD, Office of Lead Hazard Control Clearance and Healthy Homes, Lead Hazard Control Clearance Survey Final Report (Oct. 2015) 13, 23
Joel T. Nigg, *Low Blood Lead Levels Associated with Clinically Diagnosed Attention-Deficit/Hyperactivity Disorder and Mediated by Weak Cognitive Control*, 63 BIOL PSYCHIATRY 325–31 (2008)..... 5
John Paul Wright et al., *Association of Prenatal and Childhood Blood Lead Concentrations with Criminal Arrests in Early Adulthood*, 5 PLOS MED. e101 (2008) 8
Joseph M. Braun et al., *Effect of Residential Lead-Hazard Interventions on Childhood Blood Lead Concentrations and Neurobehavioral Outcomes: A Randomized Clinical Trial*, 172 JAMA PEDIATRICS 934 (2018) 11
Mark Laidlaw, Gabriel Filippelli, Richard Sadler, Christopher Gonzales, Andrew Ball, and Howard Mielke, *Children's Blood Lead Seasonality in Flint, Michigan USA, and Soil-Sourced Lead Hazard Risks*, 13(4) INT'L J. ENVTL. RESEARCH AND PUBLIC HEALTH (Mar. 2016)..... 17
NACCHO, *Statement of Policy: Child Lead Poisoning* (Mar. 2017)..... 22
National Institute of Environmental Health Sciences, *Lead*, https://www.niehs.nih.gov/health/topics/agents/lead/index.cfm (last visited Nov. 9, 2019) 5
National Toxicology Program, *Monograph on Health Effects of Low-Level Lead*, Research Triangle Park, NC: National Institute of Environmental Health Sciences (2012) 8
Patrick J. Parsons and Kathryn G. McIntosh, *Human Exposure to Lead and New Evidence of Adverse Health Effects: Implications For Analytical Measurements*, 25(2) POWER DIFFRACTION 289 .....3, 4
RI Historical Preservation & Heritage Commission, *Guide to Lead Safety in Historic Buildings*, http://www.preservation.ri.gov/pdfs_zips_downloads/lead_pdfs/leadsafe_ri.pdf (last visited Oct. 28, 2019)..... 24
Richard L. Canfield, et al., *Intellectual Impairment in Children with Blood Lead Concentrations below 10 μg per Deciliter*, 348 NEW ENG. J. MED. 1517 (2003). 8

Sherry L. Dixon et al., *Exposure of U.S. Children to Residential Dust Lead, 1999-2004: II. The Contribution of Lead-Contaminated Dust to Children's Blood Lead Levels*, 117 ENVTL. HEALTH PERSP. 468 (2009) 6, 11
Thermo Scientific, *Specification Sheet: Niton XLp 300 specification sheet* (Mar. 2010) 15
Trust for America's Health, *Special Policy Brief: Recommendations to Prevent and Mitigate the Effects of Lead Poisoning* (Aug. 2017) 21
U.S. ENVIRONMENTAL PROTECTION AGENCY, OFFICE OF PESTICIDE PROGRAMS, Consideration of the FQPA Safety Factor and Other Certainty Factors in Cumulative Risk Assessment of Chemicals Sharing a Common Mechanism of Toxicity, https://www.epa.gov/sites/production/files/2015-07/documents/apps-10x-sf-for-cra.pdf (last visited Nov. 11, 2019)..... 20

REGULATIONS

16 C.F.R. § 1303.1(a)..... 15
40 C.F.R. § 745.63..... 14
40 C.F.R. § 745.65..... 19
40 C.F.R. §§ 745.103..... 15
59 Fed. Reg. 7629 (1994)..... 24
745.223..... 15
83 Fed. Reg. at 30,897..... 13
Cal. Code Regs. tit. 8, § 1532.1(d)(4)(C) (2014)..... 15
Lead Safe Housing Rule, 24 C.F.R. Part 35 (2017).....26, 27

IDENTITY AND INTEREST OF AMICI CURIAE

THE AMERICAN ACADEMY OF PEDIATRICS ("AAP") is a national, not-for-profit organization dedicated to improving child and adolescent health. AAP is a membership organization that represents over 67,000 primary care pediatricians, pediatric medical subspecialists, and pediatric surgical specialists nationwide. AAP advances child and adolescent health through education, research, advocacy, and the provision of expert advice. AAP is a widely regarded authority in childhood lead poisoning prevention. AAP, which recognizes no amount of lead exposure is safe and children require a wide margin of safety, supports primary prevention strategies and protective lead hazard standards, and publishes science-based resources for both families and health professionals.

AMERICAN PUBLIC HEALTH ASSOCIATION ("APHA") is a national health organization whose mission is to champion the health of all people and communities, strengthen the profession of public health, share the latest research and information, promote best practices, and advocate for evidence-based health policies. APHA is the only organization that combines a nearly 150-year perspective, a broad-based member community, and the ability to influence federal policy to improve health.

THE NATIONAL ASSOCIATION OF COUNTY AND CITY HEALTH OFFICIALS ("NACCHO") is a national organization representing the

nation's nearly 3,000 local health departments. These city, county, district, and tribal departments work every day to protect and promote health and well-being for all people in their communities. NACCHO and local health departments promote primary prevention and advocate for the removal of lead sources from the environment prior to exposure in order to prevent the potential for adverse health effects.

THE NETWORK FOR PUBLIC HEALTH LAW ("NPHL") is a national organization dedicated to improving community health through law and policy. NPHL provides legal technical assistance, resources, and training to public health officials, practitioners, advocates, and attorneys so that they can make full use of the law as a tool to improve health outcomes. NPHL has a strong focus on environmental public health and has published resources about the health consequences of lead and policy measures that can be implemented to address lead poisoning. While organizations and individuals committed to improving public health can join the Network, the views expressed in this brief are solely those of Network staff and may not represent those of any affiliated individuals or institutions.

DR. BRUCE LANPHEAR is a Professor in the Faculty of Health Sciences at Simon Fraser University in Vancouver, British Columbia.

INTRODUCTION

Lead poisoning is an entirely preventable disease that results from exposure to environmental sources of lead, such as dust, paint, soil, and water.[1] Throughout the country, children continue to be exposed to preventable lead hazards and develop lead poisoning at unacceptable rates.[2] According to the Centers for Disease Control and Prevention ("CDC"), 4.10% of U.S. children under six had blood lead levels above the CDC reference level of 5 micrograms per deciliter (μg/dL) in 2014.[3] Applying this percentage to the country's under six population, it is estimated that approximately 995,609 children are likely to have elevated blood lead levels (EBLLs) above the CDC's reference value.[4] The estimated costs

---

[1] Patrick J. Parsons and Kathryn G. McIntosh, *Human Exposure to Lead and New Evidence of Adverse Health Effects: Implications For Analytical Measurements*, 25(2) POWER DIFFRACTION 289, 289 (2010).

[2] *Id.* at 290.

[3] Columbia Law School Health Justice Advocacy Clinic, *The Cost of Childhood Lead Poisoning in the United States of America*, 1 (2019) https://www.law.columbia.edu/sites/default/files/microsites/clinics/health-advocacy/usa_cba.pdf. In 2014, the most recent year for complete CDC data, 102,447 of the 2,496,140 tested children younger than 72 months had BLL above 5 μg/dL (4.10%). However, not all children are tested for lead. Assuming that these rates of EBLL prevalence apply to all U.S. children under 72 months of age yields an estimate of 995,609 EBLL children nationwide, not including children over 72 months of age. This estimate provides an upper bound for the number of children with BLL over 5 μg/dL, since testing rates are typically higher among higher risk children.

[4] *Id*.

associated with one cohort of children ages one to two years old who have EBLLs above the CDC reference could be almost $11 billion.[5]

Because lead poisoning causes permanent and devastating health effects, it is a major threat to public health, especially among children.[6] Lead affects most major bodily systems, including the central nervous, peripheral nervous, renal, cardiovascular, and reproductive systems.[7] Thus, lead exposure can lead to a wide range of medical disorders, such as encephalopathy, anemia, peripheral neuropathy, renal failure, hypertension, dental caries, osteoporosis, and reproductive dysfunction.[8] EBLLs can result in developmental and behavioral problems in children, including decreased IQ, diminished academic abilities, attention deficit disorder, learning and developmental delays, inattention, impulsivity, aggression, conduct disorder, antisocial behavior, criminal behavior, and hyperactivity.[9]

---

[5] *Id*.
[6] American Academy of Pediatrics, Council on Environmental Health, *Policy Statement: Prevention of Childhood Lead Toxicity*, 138 PEDIATRICS 1, 5 (July 2016) ("AAP Policy Statement"), https://pediatrics.aappublications.org/content/138/1/e20161493.
[7] Patrick J. Parsons and Kathryn G. McIntosh, *Human Exposure to Lead and New Evidence of Adverse Health Effects: Implications For Analytical Measurements*, 25(2) POWER DIFFRACTION 289, 290 (2010).
[8] *Id*.
[9] AAP Policy Statement, at 3–4.

The severe physical, developmental, and cognitive effects corollary to lead poisoning necessitate primary prevention strategies that protect children from lead exposure before they are poisoned and suffer permanent brain damage. Lead hazard standards that identify the lowest levels of lead content and are based in modern science are a critical component of primary prevention of lead poisoning.

SUMMARY OF ARGUMENT

Overwhelming scientific evidence demonstrates that no amount of lead exposure is safe and even the lowest levels of exposure result in long-term poor health consequences.[10] The Environmental Protection Agency ("EPA") has concluded that effects of lead poisoning are "devastating and irreversible."[11] To prevent lead poisoning, it is critical that lead hazard standards are based in science and stringent enough to be health-protective. The EPA's rulemaking in response to this Court's mandamus order, Review of the Dust-Lead Hazard Standards and the Definition of Lead-Based Paint, EPA–HQ–OPPT–2018–0166, not only

[10] *See, e.g.,* AAP Policy Statement, at 1; CDC, *Blood Lead Levels in Children*, https://www.cdc.gov/nceh/lead/prevention/blood-lead-levels.htm (last visited Nov. 23, 2019); National Institute of Environmental Health Sciences, *Lead*, https://www.niehs.nih.gov/health/topics/agents/lead/index.cfm (last visited Nov. 9, 2019); Joel T. Nigg, *Low Blood Lead Levels Associated with Clinically Diagnosed Attention-Deficit/Hyperactivity Disorder and Mediated by Weak Cognitive Control*, 63 BIOL PSYCHIATRY 325–31 (2008).

[11] EPA, *What You Need to Know About Lead Poisoning* (2014), https://www.epa.gov/sites/production/files/2014-05/documents/what_you_need_to_know_about_lead_poisoning.pdf.

contravenes the accepted science; it also fails to comply with the spirit of the order. The EPA's statutory duties under the Toxic Substances Control Act ("TSCA"), 15 U.S.C. § 2681, and the Court's order make clear that the agency must "engage in an ongoing process, accounting for new information, and to modify initial standards when necessary to further Congress's intent: to prevent childhood lead poisoning and eliminate lead-based paint hazards."[12]

The EPA will fail its obligation to protect public health if the challenged rule is not further amended. The lead hazard and clearance standards for dust-lead and soil-lead in EPA's current rule are insufficient, based on decades-old science, and should be lowered to improve health outcomes. Lower hazard standards are both health-protective and feasible.

EPA's justification for failing to revise the definition of lead-based paint is unfounded. EPA purports to need additional information on the association between paint and dust to revise the definition of lead-based paint. However, it is well documented that the majority of dust-lead hazards are a result of deteriorating lead paint and high friction surfaces.[13] EPA also claimed a lack of knowledge

---

[12] *A Community Voice v. EPA*, 878 F.3d 779, 784 (9th Cir. 2017).

[13] Contemporary Pediatrics, *Lead Poisoning: What's New About an Old Problem*? (2015), https://www.contemporarypediatrics.com/pediatrics/lead-poisoning-whats-new-about-old-problem; David E. Jacobs et al., *The Prevalence of Lead-Based Paint Hazards in U.S.* Housing, 110 ENVT'L HEALTH PERSPECTIVES A599 (2002), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1241046/; Sherry L. Dixon et al., *Exposure of U.S. Children to Residential Dust Lead, 1999-2004: II. The*

about technological feasibility. Yet, technology has advanced significantly since the rule was first promulgated, as evidenced by the numerous jurisdictions already deploying modern technology to detect lead in paint at levels well below the EPA's current definition.

EPA failed to revise the clearance standards that are used to determine that a house is safe after abatement. For the rule to be effective, clearance standards must be revised so they are at least more protective than lead hazard standards. By setting clearance standards significantly *higher* than lead hazard standards, EPA created a loophole that allows homes with significant lead hazards to pass clearance testing. Given the substantial delay in revising lead hazard standards thus far, there is no reason to continue undue delay and risk further harm to children and occupants. Because primary prevention is the only public health and pediatric-supported approach to lead poisoning, clearance standards should be set as the lowest detectable level of lead content, if not to zero.

Without further amendment, the current rule, which is based on antiquated and unprotective standards, will result in the preventable lead poisoning and permanent brain damage of children throughout the country. While no socioeconomic group is free from the threat of lead poisoning, statistically, this

---

Contribution of Lead-Contaminated Dust to Children's Blood Lead Levels, 117 ENVTL. HEALTH PERSP. 468 (2009).

rule will have a disproportionate effect on low-income and minority children. State and federal lead poisoning prevention programs, as well as the American people, trust the EPA to adopt lead standards that reflect current science and are protective of health.

ARGUMENT

I. The Challenged Rule is Inconsistent with Modern Science, Placing Children at Risk of Lead Poisoning and Permanent Brain Damage

"The science is well-established that miniscule amounts of lead can have permanent detrimental impacts on children."[14] The EPA's standards ignore the CDC's findings, which include a determination that there is no safe level of lead

[14] Comments of Bruce Lanphear, M.D., M.P.H. on Proposed Rule, EPA-HQ-OPPT-2018- 0166 (Aug. 16, 2018) ("Lanphear Comments"), https://www.regulations.gov/document?D=EPA-HQ-OPPT-2018-0166-0310. *See, e.g.,* Declaration of Bruce P. Lanphear, M.D., M.P.H. (Aug. 18, 2016), appended to the Petition for Writ of Mandamus. *See also* Bruce P. Lanphear, Kim Dietrich, Peggy Auinger and Christopher Cox., *Cognitive Deficits Associated with Blood Lead Concentrations <10 μ/dL in US Children and Adolescents*, 115 PUB. HEALTH REP. 521 (2000); Richard L. Canfield, et al., *Intellectual Impairment in Children with Blood Lead Concentrations below 10 μg per Deciliter*, 348 NEW ENG. J. MED. 1517 (2003); Bruce P. Lanphear et al., *Low-Level Environmental Lead Exposure and Children's Intellectual Function: An International Pooled Analysis*, 113 ENVTL. HEALTH PERSP. 894 (2005); Anne Evens et al., *The impact of low-level lead toxicity on school performance among children in the Chicago Public Schools: a population-based retrospective cohort study*, 14 ENVTL. HEALTH 21 (2015); John Paul Wright et al., *Association of Prenatal and Childhood Blood Lead Concentrations with Criminal Arrests in Early Adulthood*, 5 PLOS MED. e101 (2008).

exposure for children.[15] TSCA defines lead-based paint hazards as "any condition that causes exposure to lead from [. . .] dust, [. . .] soil, [or] [. . .] paint [. . .] that would result in adverse human health effects as established by the [EPA]."[16] With no safe level of lead, *any* lead content in soil, dust, or paint amounts to a condition that would result in adverse health effects.

Because scientific evidence continues to reflect that there is no safe level of lead exposure, the target level would need to be zero to maintain truly protective standards. As the CDC downwardly revises the blood lead reference level, EPA's standards should track these standards.[17] Moreover, EPA should periodically review the levels and confer with CDC so that EPA's standards remain consistent with the latest National Health and Nutrition Examination Survey (NHANES) data on which CDC bases its reference level.[18] Such coordination would ensure that EPA updates its standards regularly, as science and public health standards evolve.

---

[15] CDC, *Lead Poisoning Prevention*, https://www.cdc.gov/nceh/lead/prevention/blood-lead-levels.htm (last visited Oct. 26, 2019). In 2012, U.S. Department of Health and Human Services reported that blood lead concentrations <5 μg/dL are associated with adverse health effects of decreased academic achievement and IQ, as well as increased attention-related and problem behaviors. National Toxicology Program, *Monograph on Health Effects of Low-Level Lead*, Research Triangle Park, NC: National Institute of Environmental Health Sciences (2012), at xix.

[16] 15 U.S.C. § 2681.

[17] Comments of American Academy of Pediatrics on Proposed Rule, EPA-HQ-OPPT-2018- 0166 (Aug. 16, 2018) ("AAP Comments").

[18] *Id.*

The success of EPA's lead exposure reduction regulations and the ability to identify a potential lead hazard hinge on the accuracy of the lead hazard definitions. The EPA has both the duty and resources to set dust-lead hazard and clearance standards that adequately protect against childhood lead poisoning.

A. EPA's adoption of outdated dust lead levels disregards current science and the CDC's surveillance data and consequent recommendations related to blood lead levels requiring intervention.

Current scientific evidence on both acute and chronic lead exposure and its sequelae clearly indicates that EPA's dust-lead standards are insufficient to protect children from lead exposure and the development of lead poisoning. Lead in household dust is a major contributor to lead poisoning among children and is one modality that can be tested to screen for lead-based paint hazards and to prevent childhood lead toxicity.[19] When this evaluation and prediction of lead hazards occurs before occupancy, it could prevent a child's exposure to lead hazards and subsequent lead intake. Removing lead sources after this screening and prior to exposure is the most reliable way to avoid the damaging effects of lead poisoning. Yet, EPA's recently promulgated dust-lead standards are not set stringently enough to identify the majority of lead-dust hazards that result in lead poisoning, including exposures at levels well above the CDC reference level, which is based on the

[19] Bruce P. Lanphear et al., *Screening Housing to Prevent Lead Toxicity in Children,* 120 PUB. HEALTH REP. 305, 310 (2005).

population of U.S. children ages 1–5 who have blood lead levels in the highest 2.5 percent of children tested.[20] Today, the prevailing science demonstrates that it is possible to achieve more protective dust-lead hazard standards of < 5 μg/ft^2 on floors and < 40μg/ft^2 on window sills.[21] Unfortunately, EPA standards in the legally challenged rule far exceed these threshold levels.

The EPA's adoption of dust-lead hazard standards of 10 μg/ft^2 on floors and 100 μg/ft^2 on window sills is not nearly low enough to be protective of children's health. There is almost a one in four chance that children living in homes with dust-lead levels at the EPA's recently-adopted hazard standards will have blood lead levels exceeding the CDC reference level and triggering public health action. A 2009 study published by National Center for Healthy Housing and HUD researchers found that the data showed that at the dust-lead floor standard of 10 μg/ft^2, there is a 23.8 percent probability that children will have blood lead levels

[20] Research demonstrates that "the impacts of low-level lead exposure, the contribution of lead in household dust to children's blood lead concentrations and the feasibility of abating lead-based paint hazards with much lower clearance standards, demands a far more aggressive approach than what EPA has proposed." Lanphear Comments.

[21] *See* Joseph M. Braun et al., *Effect of Residential Lead-Hazard Interventions on Childhood Blood Lead Concentrations and Neurobehavioral Outcomes: A Randomized Clinical Trial*, 172 JAMA PEDIATRICS 934 (2018), doi:10.1001/jamapediatrics.2018.2382.

greater than the CDC's current reference level of 5 μg/dL.[22] At the lower 5 μg/ft^2 standard, it drops to a 14.4 percent probability that children will develop a blood lead level exceeding the CDC reference level.[23] Another study determined that dust-lead levels much lower than the floor standard before this litigation of 40 μg/ft^2 "were associated with a considerable excess risk of children having blood lead levels [greater than or equal to] 10 μg/dL [a previous CDC reference level]."[24] This study's conclusion that a floor load of 5 μg/ft^2 of lead will identify 87% of all children with a blood lead level >10 μg/dL supports setting a standard even lower than that level to achieve identification of 97.5% of children who are destined to develop a blood level over the CDC reference value of 5 μg/dL.[25] This data demonstrates the need for EPA to lower its standards to levels that are more rationally protective of children's health, reflective of science, and consistent with the CDC's emphasis on environmental assessments to identify sources of EBLLs.

---

[22] Sherry L. Dixon et al., *Exposure of U.S. Children to Residential Dust Lead, 1999-2004: II. The Contribution of Lead-Contaminated Dust to Children's Blood Lead Levels*, 117 ENVTL. HEALTH PERSP. 468, 473 tbl.6 (2009).
[23] *Id.* EPA's economic analysis of the proposed rule appears to be based on the updated CDC level, despite not adopting more protective dust-lead standards than those requested in 2009. *See Economic Analysis of the Proposed Rule to Revise the TSCA Dust-Lead Hazard Standards* (June 2018) at fig.4, https://www.regulations.gov/document?D=EPA-HQ-OPPT-2018-0166-0243.
[24] Bruce Lanphear et al., *Screening Housing to Prevent Lead Toxicity in Children,* 120 PUB. HEALTH REPORTS 305, 308 (2005).
[25] *Id.* at 309.

In addition to increasing the likelihood that hazards will be identified, dust-lead hazard standards of < 5 μg/ft^2 on floors and < 40μg/ft^2 on window sills are also technically and financially feasible. The 2015 HUD Lead Hazard Control Clearance Survey suggests that a dust-lead hazard standard of 5 μg/ft^2 for floors can be achieved 72 percent of the time, and a dust-lead hazard standard of 40 μg/ft^2 for windows is achievable 87 percent of the time using the most common and readily available methods for lead hazard control.[26] Ultimately, standards need to be as low as possible to be health-protective.[27]

B. EPA's failure to update the definition of lead-based paint to reflect scientific standards places occupants in danger of lead exposure.

If the EPA does not lower the definition of lead-based paint, lead hazard inspections will not identify lead in paint that, if disturbed, could create dangerous lead hazards. Dust-lead standards do not exist in a vacuum. Dust-lead hazards are more likely to exist in homes with deteriorated interior lead-based paint, which makes accurate lead-based paint identification paramount.[28] In granting the writ of

---

[26] HUD, Office of Lead Hazard Control Clearance and Healthy Homes, Lead Hazard Control Clearance Survey Final Report (Oct. 2015) ("2015 HUD Lead Hazard Control Clearance Survey"), https://www.hud.gov/sites/documents/CLEARANCESURVEY_24OCT15.PDF.
[27] *See* AAP Policy Statement, at 2.
[28] David E. Jacobs et al., *The Prevalence of Lead-Based Paint Hazards in U.S.* Housing, 110 ENVT'L HEALTH PERSPECTIVES A599, 603 (2002), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1241046/.

mandamus, this Court rightfully ordered the EPA to update lead-based paint and dust-lead hazard standards.[29] Yet, the EPA claimed that it cannot revise the definition of lead-based paint because it lacks sufficient information "to establish a statistically valid causal relationship between concentrations of lead in paint (lower than the current definition) and dust-lead loadings which cause lead exposure."[30] This is contradicted by science and the current regulatory framework under TSCA. AAP has expressed great concern over EPA's failure to update the definition of lead-based paint, which has remained unchanged since the 1970s, despite "significant advancements in medical and public health research on the hazards of lead for children's health."[31] Of the three media in the TSCA definition of lead-based paint hazards—dust-lead, soil-lead, and lead-based paint—lead-based paint contains the highest lead content that contributes significantly to the development of dust-lead and soil-lead.[32] "Lead-based paint is the most common, highly concentrated source of lead exposure for children who live in older housing."[33]

---

[29] *Cmty. Voice v. United States EPA (In re Cmty. Voice)*, 878 F.3d 779, 786 (9th Cir. 2017).
[30] 83 Fed. Reg. at 30,897.
[31] AAP Comments.
[32] 40 C.F.R. § 745.63.
[33] AAP Policy Statement, at 5 (citing Clark CS, Bornschein RL, Succop P, Que Hee SS, Hammond PB, Peace B, *Condition and type of housing as an indicator of potential environmental lead exposure and pediatric blood lead levels*, ENVIRON RES. 1985;38(1):46–53).

Lead-based paint and lead-contaminated soil particles frequently contaminate house dust, a primary pathway to exposure for children.[34]

The EPA can and should update the definition of lead-based paint to reflect current science. EPA should define lead-based paint as paint containing lead in excess of 0.009 percent. The lower-level content will align the EPA's definition of lead-based paint with the Consumer Product Safety Commission's ("CPSC") current definition of lead-based paint, which was adopted after scientific review in 2009.[35] Given that the CPSC banned paint containing lead levels in excess of 0.06 percent in 1978, it strains credulity that EPA does not have sufficient scientific evidence to further update its definitions.

Some jurisdictions already use existing technology to detect lead in paint at levels below the 0.5 percent identified in EPA's current definition.[36] X-ray fluorescence (XRF) spectrum analyzers, instruments used to measure lead

---

[34] *Id.* (citing Lanphear BP, Matte TD, Rogers J, et al., *The contribution of lead-contaminated house dust and residential soil to children's blood lead levels. A pooled analysis of 12 epidemiologic studies*, ENVIRON RES. 1998;79(1):51–68).
[35] 40 C.F.R. §§ 745.103, 745.223 and 16 C.F.R. § 1303.1(a).
[36] See Cal. Code Regs. tit. 8, § 1532.1(d)(4)(C) (2014) ("Objective data for an initial assessment that demonstrate surface coating or material that contain lead at concentrations equal to or exceeding 0.06% lead dry weight (600 ppm) demonstrate the presence of lead surface coatings or material that constitute a health hazard to employees engaged in lead-related construction work."). EPA's July 2019 rule stated "LBP means paint or other surface coatings that contain lead in excess of 1.0 milligrams per centimeter squared or 0.5 percent by weight." Definition of Lead-Based Paint, 84 Fed. Reg. 32,632 (July 9, 2019) (to be codified at 40 C.F.R. pt. 745).

concentration in paint and other media, have "no inconclusive range."[37] Thus, technology currently exists to identify the miniscule levels of lead in paint. The regulatory framework and technological feasibility indicate the need for an updated definition of lead-based paint, and there is robust science connecting current levels of lead in paint to demonstrable negative health consequences.

The EPA's current standards are not low enough for a risk assessment or clearance test to sufficiently protect children from lead poisoning. This leads to a false sense of safety among occupants and contractors and fails to trigger the Renovation, Repair and Painting Rule that requires the use of lead-safe work practices. For example, the current definition of lead paint does not capture lead content that would create a lead-dust hazard if unsafe work practices, such as dry sanding, were used.[38]

C. EPA's adopted soil-lead standards contravene current science and disregard the CDC's blood lead reference level.

---

[37] Thermo Scientific, *Specification Sheet: Niton XLp 300 specification sheet* (Mar. 2010), https://assets.thermofisher.com/TFS-Assets/CAD/Specification-Sheets/NitonXLp300-spec-sheet.pdf. To go to a lower level, the XRF can be updated: "If you are in a jurisdiction with more stringent standards, you can easily change the action level to ensure compliance with local regulations." *Id.*

[38] *See* David E. Jacobs et al., *The Prevalence of Lead-Based Paint Hazards in U.S.* Housing, 110 ENVT'L HEALTH PERSPECTIVES A599, 605 (2002) ("if sanded and turned into contaminated dust that is spread across an average-size room, only 1 ft^2 of paint at a lead concentration of 1 mg/cm^2 is needed to produce a settled dust lead level of 9,300 μg/ft2, several orders of magnitude above current dust lead standards").

Current scientific understanding clearly indicates that EPA's soil-lead hazard standards are insufficient to protect children from lead poisoning. The World Health Organization identifies lead in soil as a major concern for children's health and research demonstrates that lead accumulated in soil is a "strong predictor for blood lead of children."[39]

Soil is primarily contaminated with lead from past use of leaded gasoline and deterioration of exterior lead based paints.[40] Particles of lead collect on trees, buildings, and other surfaces before washing into surrounding soil where they can remain for hundreds of years.[41] Thus, soil in close proximity to houses and buildings is more likely to be contaminated; since children often live and play near these structures, soil in their immediate environments is more likely to be contaminated.[42] Urban soil contamination is common, as soil in most major U.S.

---

[39] Howard Mielke, Mark Laidlaw, and Chris Gonzales, *Estimation of leaded (pb) gasoline's continuing material and health impacts on 90 US urbanized areas*, 37 (1) ENVTL. INT'L 248, 249 (2011) ("Estimation of leaded gasoline's continuing impact"); Howard Mielke, Christopher Gonzales, Eric Powell, and Paul Mielke Jr, *Urban soil-lead (Pb) footprint: retrospective comparison of public and private properties in New Orleans*, 30 (3) ENVTL. GOCHEMISTRY AND HEALTH 231, 232 (2007) ("Urban soil-lead (Pb) footprint").

[40] Mark Laidlaw, Gabriel Filippelli, Richard Sadler, Christopher Gonzales, Andrew Ball, and Howard Mielke, *Children's Blood Lead Seasonality in Flint, Michigan USA, and Soil-Sourced Lead Hazard Risks*, 13(4) INT'L J. ENVTL. RESEARCH AND PUBLIC HEALTH (Mar. 2016), at 2 ("Children's Blood Lead Seasonality in Flint").

[41] Estimation of leaded gasoline's continuing impact, at 250–51.

[42] *Id.* at 251.

cities is contaminated with lead.[43] When soil is contaminated, the bioaccessible lead is concentrated in the top 20–30 cm of the surface, making it easily accessible to children.[44]

Children are most commonly exposed to lead-contaminated soil by playing outside, contacting lead-contaminated soil that is tracked into homes, or ingesting lead in soil or dust.[45] When toddlers are exposed, their undeveloped intestines "absorb as much as 50% of the lead they inadvertently ingest."[46] Inadvertent ingestion of lead-contaminated soil, often through developmentally appropriate hand-to-mouth activity and air-to-inhalation, is one of the most common pathways of childhood lead exposure.[47] Soil ingestion is common, with toddlers and small children ingesting more soil than adults as a result of developmentally appropriate exploratory behaviors.[48] The prevalence of soil contamination and the multiple

[43] Children's Blood Lead Seasonality in Flint, at 2.
[44] *Id*.
[45] *Id*. Urban soil-lead (Pb) footprint, at 238.
[46] *Id*.
[47] *Id*; Estimation of leaded gasoline's continuing impact, at 252.
[48] Howard Mielke, Christopher Gonzales, Eric Powell, Paul Mielke, *Environmental and health disparities in residential communities of New Orleans: The need for soil intervention to advance primary prevention*, 51 ENVTL. INT'L 73, 79 (2013) ("Environmental and health disparities in residential communities of New Orleans").

pathways of human exposure to lead call for thoroughly protective soil-lead hazard standards, especially since no safe level of lead in blood has been identified.[49]

Despite this fact and the CDC's conclusive determination that children require a wide margin of safety, the EPA's current soil-lead hazard definition is far too high to be protective and is based on long-outdated science. EPA's current soil-lead hazard definition is 400 parts per million (μg/g) in a play area or average of 1,200 parts per million of bare soil in the rest of the yard.[50] To adequately protect children, the soil-lead hazard should be lowered to the lowest detectable amount. Research demonstrates that to prevent blood lead levels from rising above 10 μg/dL, the median soil-lead level in a community must be below 80 μg/g.[51] To prevent blood lead levels from rising above 5 μg/dL—the current CDC reference

---

[49] CDC, What Do Parents Need to Know to Protect Their Children?, https://www.cdc.gov/nceh/lead/acclpp/blood_lead_levels.htm (last updated May. 17, 2017) (last visited Oct. 15, 2019); *see also* Advisory Committee on Childhood Lead Poisoning Prevention of the CDC, Low Level Lead Exposure Harms Children: A Renewed Call for Primary Prevention (Jan. 2012).

[50] 40 C.F.R. § 745.65; Comments of Hannah Chang, Earthjustice on Proposed Rule, EPA-HQ-OPPT-2018-0166 (Aug. 16, 2018) ("Earthjustice Comments"), https://www.regulations.gov/document?D=EPA-HQ-OPPT-2018-0166-0311.

[51] Environmental and health disparities in residential communities of New Orleans at 79. Estimation of leaded gasoline's continuing impact, at 255. California EPA has already lowered its lead in soil levels to 80 μg/g for residential areas. *See generally* CALIFORNIA DEP'T OF TOXIC SUBSTANCES CONTROL HUMAN AND ECOLOGICAL RISK OFFICE, HUMAN HEALTH RISK ASSESSMENT NOTE: 3, DTSC-MODIFIED SCREENING LEVELS (Apr. 2019), https://dtsc.ca.gov/wp-content/uploads/sites/31/2019/04/HHRA-Note-3-2019-04.pdf.

level—soil-lead levels must be less than 40 μg/g to ensure that most children are reasonably protected from inadvertent exposure to lead.[52]

It is possible to maintain soil-lead levels of <40 μg/g in all communities. The median soil-lead level in non-urban areas is 16 μg/g, so all U.S. cities have low lead soil resources available nearby.[53] Soil can be transported to "child sensitive locations, such as childcare centers, playgrounds, elementary schools, and residential play areas," and placed above lead-contaminated soil.[54]

---

[52] Dr. Howard Mielke, Research Professor in the Department of Pharmacology at the Tulane University School of Medicine, applied a margin of safety factor of 10 to the EPA's current lead soil standard to determine that 40 μg/g is a soil standard that ensures that most children are reasonably protected from the risks of inadvertent exposure by environmental sources of lead. Environmental and health disparities in residential communities of New Orleans at 79. When determining standards that affect human health and safety, it is a common practice to apply a margin of safety. In fact, the EPA already uses a similar strategy when setting standards for pesticides by utilizing a standard uncertainty factor of 10 to account for interhuman variation and experimental differences. The EPA does not, however, apply a margin of safety or uncertainty factor when determining lead hazard standards, despite the fact that this a common practice, which suggests that the EPA is failing in its statutory duty to protect children's health. *See generally* U.S. ENVIRONMENTAL PROTECTION AGENCY, OFFICE OF PESTICIDE PROGRAMS, Consideration of the FQPA Safety Factor and Other Certainty Factors in Cumulative Risk Assessment of Chemicals Sharing a Common Mechanism of Toxicity, https://www.epa.gov/sites/production/files/2015-07/documents/apps-10x-sf-for-cra.pdf (last visited Nov. 11, 2019).

[53] *Id.*; Howard Mielke, Chris Gonzales, Paul Mielke Jr., *The continuing impact of lead dust on children's blood lead: Comparison of public and private properties in New Orleans*, 111 (8) ENVTL. RESEARCH 1164, 1165 (2011) ("Continuing impact of lead dust").

[54] Environmental and health disparities in residential communities of New Orleans at 79.

II. Clearance Levels Should be Revised to Ensure the Safety of Occupants After Remediation and Abatement Activities

The EPA's current clearance levels have rendered "the dust-lead hazard standards […] largely meaningless for target housing within EPA's purview."[55] Despite this Court's order, EPA did not update the dust-lead clearance. As a result, the current clearance levels of 40 μg/ft^2 for floors and 250 μg/ft^2 for interior window sills are set significantly higher than lead hazard standards. This allows dangerous lead hazards to remain in homes after remediation and abatement activities disturb lead-based paint, increasing the risk of exposure to this toxic metal. Unsafe work practices can contribute significantly to lead hazard exposure.[56] Moreover, EPA's challenged rule misrepresents the availability of key scientific studies and research and the feasibility of achieving clearance at lower levels. As discussed above, clearance to the dust-lead hazard standards of 5 μg/ft^2

---

[55] Lanphear Comments. *See also* AAP Comments.

[56] *See* EPA, *Steps to LEAD SAFE Renovation, Repair, and Painting* (2013), https://www.epa.gov/sites/production/files/2013-11/documents/steps_0.pdf. According to AAP, "Lead hazard control work can result in sizable reductions in the magnitude of dust lead loading when proper procedures are followed and cleanup and postwork clearance testing are performed." AAP Policy Statement, at 8. *See also* Trust for America's Health, *Special Policy Brief: Recommendations to Prevent and Mitigate the Effects of Lead Poisoning* (Aug. 2017), http://www.southernunitedneighborhoods.org/wp-content/uploads/2016/07/10-policies-shorter-version.pdf.

on floors and 40μg/ft^2 on window sills is achievable and tracks more closely to the CDC reference level.[57]

A. The challenged rule creates a loophole that allows higher levels of lead to remain undetected after abatement.

For children to live in a safe home, lead hazard and clearance standards must be as low as possible. Failing to revise clearance levels to at least mirror the scientifically supported lead hazard standards "leaves a loophole for inadequate lead abatement activity to address clear hazards to children's health."[58] Dust-lead hazards may be identified in a home, but clean up after abatement of that hazard, which increases the lead hazard loading in the home, is less protective than the standard that necessitated abatement. Under the current regulations, one could plausibly identify a hazard, initiate "remediation" but do nothing, and still achieve clearance. This contravenes public health, medical, and environmental safety principles.[59] To protect the health and well-being of occupants, clearance levels

---

[57] *See* Braun et al., *Effect of Residential Lead-Hazard Interventions on Childhood Blood Lead Concentrations and Neurobehavioral Outcomes: A Randomized Clinical Trial*, JAMA PEDIATRICS (2018).

[58] AAP Comments.

[59] "Public health practitioners and organizations have an ethical responsibility to prevent, minimize, and mitigate health harms and to promote and protect public safety, health, and well-being." APHA, *Public Health Code of Ethics* (2019), at 5, https://www.apha.org/-/media/files/pdf/membergroups/ethics/code_of_ethics.ashx. "The National Association of County and City Health Officials (NACCHO) promotes primary prevention and advocates for the removal of lead sources from the environment prior to exposure, particularly in water and housing, in order to prevent the potential for adverse effects." NACCHO, *Statement of Policy: Child*

must never be less protective than the associated hazard. In fact, they should be more protective.

B. The challenged rule misrepresents the availability of key scientific studies and waiting for additional research continues undue delay.

The challenged rule needlessly promotes undue delay, risking further harm to children and occupants by not revising the clearance standards. It is feasible to set clearance standards for dust-lead at the same levels as the dust-lead hazard standards. Researchers have determined that clearance to dust-lead loadings on floors below 5 μg/ft^2 and in window sills below 50 μg/ft^2 was achievable in 100% of cases using a range of intervention methods.[60] The HUD October 2015 Lead Hazard Control Clearance Survey showed that clearance of dust-lead down to EPA's revised levels of dust-lead hazard standards is already occurring in a vast majority of cases using the most common abatement methods.[61] No additional substantive research or studies is necessary to establish clearance standards that at least mirror the proposed dust-lead hazard standards. In a 2000 study, scientists concluded "the key to reduce children's blood lead levels is to make leaded paint inaccessible and to clean to achieve dust lead levels (ie, clearance tests) that are

---

Lead Poisoning (Mar. 2017), https://www.naccho.org/uploads/downloadable-resources/00-03-Child-Lead-Poisoning.pdf.

[60] Braun, et al., *A Randomized Controlled Trial to Reduce Childhood Lead Exposure and Lead-Associated Neurobehavioral Deficits*, JAMA PEDIATRICS (2018).

[61] 2015 HUD Lead Hazard Control Clearance Survey.

safe."[62] The CDC now recognizes that no level of lead in blood is safe.[63] This is even more urgent in light of a new study finding an association between lead, even at low levels, and the risk of premature death.[64]

III. Outcome of Letting the Rule Stand

A. The current rule will have a disproportionate effect on low-income and minority children.

Letting the current rule stand will result in the unnecessary lead poisoning of hundreds of thousands of children throughout the United States because it is based on antiquated and unprotective standards. Based on current lead poisoning rates, the current rule will have a disproportionate effect on low-income and minority children.[65] By setting standards that inadequately protect children from exposure

---

[62] Bruce P. Lanphear et al., *Long-Term Effect of Dust Control on Blood Lead Concentrations*, 106 PEDIATRICS 4 (Oct. 2000).

[63] CDC, *Blood Lead Levels in Children*, https://www.cdc.gov/nceh/lead/prevention/blood-lead-levels.htm?CDC_AA_refVal=https%3A%2F%2Fwww.cdcm.gov%2Fnceh%2Flead%2Facclpp%2Fblood_lead_levels.htm (last visited Nov. 9, 2019).

[64] Bruce P. Lanphear et al., *Low-level lead exposure and mortality in US adults: a population-based cohort study*, 3 LANCET PUB. HEALTH e177 (Apr. 2018).

[65] However, lead poisoning can affect children of any socioeconomic status. *See* Emily A. Benfer, *Contaminated Childhood: How the United States Failed to Prevent the Chronic Lead Poisoning of Low-Income Children and Communities of Color*, 41 HARV. ENVTL. L. REV. 493, 495 (2017) ("Contaminated Childhood"). For example, families that move into old, historic homes in wealthy suburbs are particularly at risk, especially if they undergo renovations that disturb lead paint. *See generally* RI Historical Preservation & Heritage Commission, *Guide to Lead Safety in Historic Buildings*, http://www.preservation.ri.gov/pdfs_zips_downloads/lead_pdfs/leadsafe_ri.pdf (last visited Oct. 28, 2019).

to lead hazards and lead poisoning, the EPA perpetuates racial disparities and socioeconomic inequality, which negatively impacts the health and academic outcomes of these communities. This flagrantly contravenes the EPA's duty to comply with Executive Order 12898 and Title VI of the Civil Rights Act of 1964, which expressly require federal agencies to improve environmental protection in minority and low-income communities and to promulgate regulations to protect against adverse environmental impacts on communities of color, respectively.[66]

Poverty and lower socioeconomic status are contributors to poor health outcomes.[67] People living in poverty are more likely to be exposed to environmental hazards, such as lead, and since the burden of poverty falls primarily on communities of color, children in these communities are more likely to be exposed to lead hazards and experience adverse health effects related to lead poisoning.[68] The risk of lead poisoning disproportionately impacts minority children, with non-Hispanic Black children nearly three times more likely than White children to experience highly elevated blood lead levels.[69] For example, a study conducted by Dr. Howard Mielke found that "poorer, African-American families tend to live in the more lead-contaminated inner-city while wealthier,

[66] Exec. Order No. 12,898, 59 Fed. Reg. 7629 (1994).
[67] Contaminated Childhood, at 502.
[68] *Id.* at 503–504.
[69] *Id*. at 504.

mostly white families tend to live in the less lead-contaminated outlying areas of the city."[70]

This disparity has enormous societal consequences for families and children. One such consequence is lower academic achievement, academic failure, and learning delays.[71] High school dropout rates correlate with elevated levels of lead in soil.[72] Moreover, lead poisoned children are seven times more likely to drop out of high school and six times more likely to enter the criminal justice system.[73]

By setting standards that inadequately protect children from lead poisoning, the EPA enables a system that "deprive[s] low-income and minority children of equal opportunity to succeed" and traps communities "in poverty where they are unjustly burdened by health disparities and poor quality of life."[74] The EPA must set standards that prevent childhood lead poisoning in order to break this cycle.

B. Other federal agencies that adopt EPA's lead hazard standards in their own lead poisoning prevention programs rely on EPA to set scientifically supported standards.

Other federal programs, such as the Department of Housing and Urban Development ("HUD"), use the EPA's dust-lead hazard standards.[75] Therefore, the

---

[70] Continuing impact of lead dust, at 1170.
[71] Contaminated Childhood, at 500.
[72] Estimation of leaded gasoline's continuing impact, at 254.
[73] Herbert L. Needleman, *Childhood Exposure to Lead: A Common Cause of School Failure*, 74 Phi Delta Kappa International 35, 36 (1994).
[74] *Id.* at 495–96.
[75] *See generally* Lead Safe Housing Rule, 24 C.F.R. Part 35 (2017).

EPA's inadequate standards are widely used in federally assisted housing units throughout the country. Over 2.7 million children live in federally assisted housing programs.[76] And in 2016, HUD reported that it is aware of 57,000 federally assisted housing units with lead hazards and 450,000 federally assisted housing units built before 1978 that could potentially develop a lead hazard.[77] Federally assisted housing units are often poorly maintained and contain lead hazards or lead-based paint.[78] As a result, millions of children living in federally assisted housing units are likely to be exposed to lead hazards and left unprotected by inadequate standards. HUD's Lead Safe Housing Rule requires risk assessments in numerous federal programs either prior to occupancy or when a child with a blood lead level at or above the CDC reference value is identified. These inspections follow the EPA's lead hazard standards and clearance standards. EPA's failure to update the standards to reflect science places millions of children in federally assisted housing at risk of prolonged exposure and associated harm.

C. Numerous states currently trust EPA to adopt lead hazards standards that reflect current science.

In addition to HUD's federal housing programs, many jurisdictions throughout the country use the EPA's dust-lead hazard standards as a guideline

---

[76] *Id.* at 509, citing U.S. DEP'T OF HOUS. & URBAN DEV., RESIDENT CHARACTERISTICS REPORT (2017).
[77] *Id*.
[78] *Id.* at 495.

when setting their own local rules. As a result, EPA's decision to ignore the science reverberates across the country, further threatening the health of children nationwide. Other housing programs trust that the EPA, an agency with far more resources than most state-based housing programs and a statutory duty to develop protective standards, will conduct the research necessary to fulfill its obligation to set adequate standards. When the EPA fails to set protective standards, children in housing programs throughout the country are put at a greater risk of lead poisoning and its detrimental health effects.

D. The EPA's lead hazard standards create a false sense of safety that will result in unwitting exposure to lead based-paint health hazards.

The EPA creates a false sense of safety in the American people when it fails to set protective standards.[79] Citizens look to government agencies to protect them by creating rules that will foster safe practices. Part of the EPA's duty is to "engage in an ongoing process, accounting for new information, and to modify initial standards when necessary to further Congressional intent: to prevent childhood lead poisoning and eliminate lead-based paint hazards."[80] Americans trust that the EPA is meeting its duty by updating rules as necessary to prevent childhood lead poisoning, especially after the agency admitted the standards were

[79] AAP Policy Statement, at 7.
[80] *A Community Voice v. EPA*, 878 F.3d 779, 784 (9th Cir. 2017).

out of date and was ordered to update them by a court. Consequently, many falsely believe that their homes are free of lead hazards when their residences are inspected using these insufficient standards, which may not reveal whether true lead hazards are present. Moreover, the EPA is required to develop public education and outreach programs to increase awareness of the consequences of lead exposure.[81] However, these programs cannot be effective unless the standards correctly identify hazardous lead conditions. When the EPA knowingly fails to align its standards with current science, Americans experience a false sense of safety while their children are in imminent danger of exposure to a well-known neurotoxin.

CONCLUSION

The undeniable severity of the adverse health effects of lead exposure, even at low levels, demand action. The EPA has a statutory and moral duty to promulgate rules in line with current scientific evidence and regularly review the standards. "Congress did not want EPA to set initial standards and then walk away."[82]

[81] 15 U.S.C. § 2685(d)(1)(G)-(I).
[82] *Id.*