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Dear Program Management Staff,

Please find attached comments from Natural Resources Defense Council (NRDC), Turner Environmental Law Clinic at Emory University School of Law, and the Nuclear Information and Resource Service (NIRS) in response to the Nuclear Regulatory Commission (NRC)'s Systematic Assessment for How the NRC Addresses Environmental Justice in Its Programs, Policies, and Activities, 86 Fed. Reg. 36,307 (July 9, 2021) (comment period extended to this day via 86 Fed. Reg. 43,696 (Aug. 10, 2021)).

If you have any difficulties with the files, please don't hesitate to contact me at the number below or in response to this email.

Sincerely,
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Re: NRDC *et al.*, Comments on Systematic Assessment for How the NRC Addresses Environmental Justice in Its Programs, Policies, and Activities, Docket ID NRC-2021-0137

Dear U.S. Nuclear Regulatory Commission:

The Natural Resources Defense Council (NRDC), Turner Environmental Law Clinic at Emory University School of Law, and the Nuclear Information and Resource Service (NIRS) write collectively today to timely respond to the Nuclear Regulatory Commission (NRC)'s *Systematic Assessment for How the NRC Addresses Environmental Justice in Its Programs, Policies, and Activities*, 86 Fed. Reg. 36,307 (July 9, 2021) (comment period extended to this day via 86 Fed. Reg. 43,696 (Aug. 10, 2021)).

I. Statement of Interest

NRDC is a national non-profit environmental organization with over one million combined members and activists. NRDC's activities include maintaining and enhancing environmental quality and monitoring federal agency actions to ensure that federal statutes enacted to protect human health and the environment are fully and properly implemented. Since 1970, NRDC has sought to improve the environmental, health, and safety conditions at the civil nuclear facilities licensed by the Nuclear Regulatory Commission (NRC) and NRC Agreement States under standards set by the Environmental Protection Agency (EPA).

The Turner Environmental Law Clinic at Emory University School of Law provides important pro bono representation to individuals, community groups, and non-profit organizations that seek to protect and restore the natural environment and promote environmental justice. Through its work – which includes legal representations regarding civilian nuclear power generation and the

resulting nuclear waste – the Clinic offers students an intense, hands-on introduction to environmental law and trains the next generation of environmental attorneys.

The Nuclear Information and Resource Service (NIRS) was founded more than 40 years ago to be the national information and networking center for individuals and organizations concerned about nuclear power, radioactive waste, radiation, and sustainable energy issues. NIRS still fulfills that core function, but has expanded both programmatically and geographically. NIRS initiates large-scale organizing and public education campaigns on specific issues, such as preventing construction of new reactors, radioactive waste transportation, deregulation of radioactive materials, and more.

II. Summary of Comments

We commend the NRC for taking this step and beginning the process of assessing how the agency addresses environmental justice. But we caution the agency that this is only an initial step on what will be a long road. The NRC does not now adequately address environmental justice in its work. Our past urgings to reform the NRC’s public participation rules were not met with action, but the time to reform these rules begins now. Simply checking the box on this process and then returning to the status quo is not an option. In order to systematically assess how the agency addresses environmental justice, as the agency states its intent, the NRC must recognize the history of environmental racism in the nuclear industry, recognize that the agency still violates environmental justice in small and large ways, and take affirmative steps to act on the agency’s deficiencies in addressing environmental justice.

The NRC has the authority to address broadly environmental justice throughout its programs, policies, and activities. The NRC’s mission already requires the agency to “license and regulate the Nation’s civilian use of radioactive materials *to provide reasonable assurance of adequate protection of public health and safety* and to promote the common defense and security and to protect the environment.” And the agency’s statutory authority comes from the Atomic Energy Act, under which the agency has broad discretion to regulate nuclear material “to protect the health and safety of the public.”¹ The NRC should take direction from the Biden Administration’s Executive Order 14008, Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis (hereinafter “EO 14008”), which directs that “[a]gencies shall make achieving environmental justice *part of their missions* by developing programs, policies, and activities to address the disproportionately high and adverse human health, environmental, climate-related and other cumulative impacts on disadvantaged communities, as well as the accompanying economic challenges of such impacts.”²

In our comments we first present a concise history of environmental justice as a concept and social movement. We follow with a short treatment on how that concept has been addressed by the wider federal government, and then, of course, at the NRC. With that background and, based on our decades of experience before the agency, we then detail specific steps for the NRC to

¹ 42 U.S.C. 2012.

² Executive Order 14008, Executive Order on Tackling the Climate Crisis at Home and Abroad, 86 Fed. Reg. 7619 (Jan. 27, 2021) <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/executive-order-on-tackling-the-climate-crisis-at-home-and-abroad/> (emphasis added).

begin this work that must vastly improve how the agency addresses environmental justice. We suggest the NRC:

- Update its 2004 Policy Statement on the Treatment of Environmental Justice Matters in NRC Regulatory and Licensing Actions to create a revised policy in partnership with community stakeholders and in line with modern understandings of environmental justice.
- Increase the resources devoted to addressing environmental justice, such that the agency is able to make diversity, equity, inclusion, and accessibility part of its inward core values; fund an Environmental Justice Advocate position within the agency with the authority to maintain the agency’s environmental justice focus; partner with the community through one or several community advisory boards; and provide the legal and technical assistance required for the public to meaningfully engage in the agency’s work through an Office of a Public Counsel.
- Finally follow the Atomic Energy Act’s direction “to encourage widespread participation” by easing the public’s burden in the agency’s hearing procedures in 10 C.F.R. Part 2.³
- Recognize the broad discretion the agency has to address environmental justice throughout its programs, policies, and activities and not just under the National Environmental Policy Act (NEPA).

We understand some of these suggestions would require substantial reforms of agency practices. Yet these reforms are required by the agency’s statutory mandate to protect public health and safety and direction from Congress and the President to use its discretion to address environmental justice. And we hope that it is clear to the agency that it is now the recipient of watchful pressure from the public and the environmental justice communities directly affected by its decisions, from Congress, and from the larger Administration. Now is the time for the NRC to act on environmental justice.

III. Background

Environmental justice is a broad and evolving concept enriched by multiple defining perspectives. For the NRC to address environmental justice in a durable and sustaining fashion, the evolution of the concept and the history of how the NRC has engaged with communities must be understood. This requires a deep dive, which the NRC itself should conduct (*infra* at 32); in our comments we describe major events that define how we think about environmental justice today generally and as applied to the NRC.

A. The Environmental Justice Movement.

The environmental justice movement originated out of a multitude of other social struggles, including the traditional environmental movement, the civil rights movement, the labor

³ 42 U.S.C. 2013.

movement, and the Indigenous movement.⁴ While environmental justice “has been an underlying frame in the politics of communities of people of color for more than a century,”⁵ the origin of national, organized activism bridging environmental and civil rights is most often attributed to the 1982 Warren County protests in North Carolina, where a Black community’s coalition-building and protests against a proposed hazardous waste landfill brought the concept of environmental justice to the national stage.⁶

The Warren County protests, and similar movements across the country, served as the impetus for studying the link between hazardous waste sites and communities of color. In 1983, Dr. Robert Bullard published the report *Solid Waste Sites and the Black Houston Community* looking at the siting of hazardous facilities in Houston, Texas.⁷ The report concluded that the city located solid waste disposal sites primarily in Black neighborhoods. Also in 1983, the U.S. General Accounting Office (GAO) conducted a similar study at the request of Congressman Walter E. Fauntroy, Chairman of the Congressional Black Caucus. The final GAO report concluded that three out of four off-site landfills in the study area were located in predominately minority communities.⁸ And in 1987 the United Church of Christ Commission for Racial Justice issued the report *Toxic Wastes and Race in the United States* examining the issues of race, class, and environmental burden on a national scale.⁹ This report found that “[r]ace proved to be the most significant among variables tested in association with the location of commercial hazardous waste facilities.”¹⁰

As can be seen from these examples, the national environmental justice movement in the 1980s focused on a specific manifestation of environmental racism – the siting of hazardous facilities in minority communities. The idea that minority communities bear a disproportionate burden of environmental hazards in their neighborhoods is a foundation of environmental justice, and the concept has grown from these origins.

⁴ See Clifford Villa, *Remaking Environmental Justice*, 66 Loy. L. Rev. 469 (2020), https://digitalrepository.unm.edu/cgi/viewcontent.cgi?article=1853&context=law_facultyscholarship. See also, Candice Youngblood, *Put Your Money Where Your Mouth Is: Actualizing Environmental Justice by Amplifying Community Voices*, 46 Ecology L. Q. 455 (2020) https://www.ecologylawquarterly.org/wp-content/uploads/2020/04/07_46.2_Youngblood_Final_Internet.pdf citing Luke W. Cole & Sheila R. Foster, *From the Ground Up: Environmental Racism and the Rise of the Environmental Justice Movement* (2001).

⁵ Ilaria Beretta, *Some Highlights on the Concept of Environmental Justice and Its Use* (Sept. 2012) <https://journals.openedition.org/eces/1135>.

⁶ Candice Youngblood, *Put Your Money Where Your Mouth Is: Actualizing Environmental Justice by Amplifying Community Voices*, 46 Ecology L. Q. 455 (2020) https://www.ecologylawquarterly.org/wp-content/uploads/2020/04/07_46.2_Youngblood_Final_Internet.pdf citing Eileen Maura McGurty, *Warren County, NC, and the Emergence of the Environmental Justice Movement Unlikely Coalitions and Shared Meanings in Local Collective Action, Society & Natural Resources*, 13 Soc’y & Nat. Resources 373, 375 (2000).

⁷ Dr. Robert Bullard, *Solid Waste Sites and the Black Houston Community*, 53 Sociological Inquiry 273 (1983).

⁸ U.S. General Accounting Office, *Sitting of Hazardous Waste Landfills and Their Correlation with Racial and Economic Status of Surrounding Communities* (June 1, 1983) <https://www.gao.gov/assets/rced-83-168.pdf>.

⁹ Commission for Racial Justice, United Church of Christ, *Toxic Wastes and Race in the United States* (1987) <https://www.nrc.gov/docs/ML1310/ML13109A339.pdf> (explains “racism is enforced and maintained by the legal, cultural, religious, educational, economic, political, environmental, and military institutions of societies. Racism is more than just a personal attitude; it is the institutionalized form of that attitude.”).

¹⁰ *Id.* at xiii.

In 1990, the SouthWest Organizing Project in New Mexico wrote a letter to the national environmental organizations (including NRDC) bringing attention to the divide between the advocacy actions of traditional environmental groups and the environmental impacts that communities of color experience.¹¹ That letter presented a wide range of harms that fall within environmental justice: “the theft of lands and water...mining companies extract minerals leaving economically depressed communities and poisoned soil and water...workers in the fields are dying and babies are born disfigured as a result of pesticide spraying.” And just as important, the letter identified procedural environmental justice harms (“we suffer from the end results of these actions, but are never full participants in the decision-making”) and recognition justice, *i.e.* the need for organizations working on these issues and in these communities to ensure staff and leaders reflect the communities through hiring practices (“The lack of people of color in decision-making positions in your organizations such as executive staff and board positions is also reflective of your histories of racist and exclusionary practices.”).

In 1991 the First National People of Color Environmental Leadership Summit met in Washington, DC and drafted the 17 Principles of Environmental Justice – now sometimes referred to as the Constitution on Environmental Justice.¹² The Preamble reads:

We, the People of Color, gathered together at this multinational People of Color Environmental Leadership Summit, to begin to build a national and international movement of all peoples of color to fight the destruction and taking of our lands and communities, do hereby re-establish our spiritual interdependence to the sacredness of our Mother Earth; to respect and celebrate each of our cultures, languages and beliefs about the natural world and our roles in healing ourselves; to ensure environmental justice; to promote economic alternatives which would contribute to the development of environmentally safe livelihoods; and, to secure our political, economic and cultural liberation that has been denied for over 500 years of colonization and oppression, resulting in the poisoning of our communities and land and the genocide of our peoples, do affirm and adopt these Principles of Environmental Justice.

As is demonstrated even in the preamble, these Principles call for more than addressing the disproportionate burden of environmental hazards that impact environmental justice communities. Rather, they include such themes as “ecological principles; justice and environmental rights; autonomy/self-determination; corporate-community relations; policy, politics and economic processes; [and] social movement building.”¹³

¹¹ Letter from SouthWest Organizing Project to National Wildlife Federation (Mar. 16, 1990) <https://www.ejnet.org/ej/swop.pdf>.

¹² Principles of Environmental Justice (1991) <http://www.ejnet.org/ej/principles.pdf>.

¹³ Ilaria Beretta, *Some Highlights on the Concept of Environmental Justice and Its Use* (Sept. 2012) <https://journals.openedition.org/eces/1135> citing Dorceta Taylor, *The Rise of the Environmental Justice Paradigm: Injustice Framing and the Social Construction of the Environmental Discourses*, 43 *American Behavioral Scientist* 508 (2000).

The work of environmental justice continued to expand in scope during the late 1990's and early 2000's, especially with respect to procedural matters.¹⁴ Most importantly, in 1996, the Working Group Meeting on Globalization and Trade met in Jemez, New Mexico and drafted the Jemez Principles for Democratic Organizing.¹⁵ These Principles offer basic standards for working with communities and start with the directive to "Be Inclusive:"

If we hope to achieve just societies that include all people in decision-making and assure that all people have an equitable share of the wealth and the work of this world, then we must work to build that kind of inclusiveness into our own movement in order to develop alternative policies and institutions to the treaties policies under neoliberalism. This requires more than tokenism, it cannot be achieved without diversity at the planning table, in staffing, and in coordination.¹⁶

The concept of environmental justice now includes the principles of distributive and procedural justice and ideas like recognition, corrective, and social justice.¹⁷ Distributive justice addresses the fact that certain demographics are unequally burdened with negative environmental impacts. Procedural justice deals with the fair process of and equal access to decision making. For example, the EPA's definition of environmental justice addresses both distributive and procedural justice (*infra* at 7).

- Recognitional justice "is typically concerned with respecting identities and cultural difference; it is about the extent to which different agents, ideas and cultures are respected and valued in interpersonal encounters and in public discourse and practice."¹⁸
- Corrective justice "involves fairness in the way punishments for lawbreaking are assigned and damages inflicted on individuals and communities are addressed."¹⁹
- Social justice is "social equity: an assessment of the role of sociological factors (race, ethnicity, class, culture, lifestyles, political power, and so forth) in environmental decisionmaking."²⁰

¹⁴ For example, in 2002 the Second National People of Color Environmental Leadership Summit produced the Principles of Working Together, <https://www.ejnet.org/ej/workingtogether.pdf>, and the Principles of Alliance with Green Groups. <https://www.ejnet.org/ej/greengroups.pdf>.

¹⁵ Jemez Principles for Democratic Organizing (1996) <http://www.ejnet.org/ej/jemez.pdf>.

¹⁶ *Id.*

¹⁷ See e.g., Rachael E. Salcido, *Retooling Environmental Justice*, 39 UCLA J. Envtl. L. & Pol'y 1 (2021) https://escholarship.org/content/qt3c3285qn/qt3c3285qn_noSplash_3c89c84cbfa1482a8fd02e73b32442ca.pdf?t=qq7quo; Candice Youngblood, *Put Your Money Where Your Mouth Is: Actualizing Environmental Justice by Amplifying Community Voices*, 46 Ecology L. Q. Vol. 455 (2020) https://www.ecologylawquarterly.org/wp-content/uploads/2020/04/07_46.2_Youngblood_Final_Internet.pdf; Adrian Martin et al., *Justice and Conservation: The Need to Incorporate Recognition*, 197 Biological Conservation 254 (2016) <https://www.sciencedirect.com/science/article/pii/S0006320716301045>; Robert R. Kuehn, *A Taxonomy of Environmental Justice*, 30 Envtl. L. Rep. 10681 (2000) <https://core.ac.uk/download/pdf/61689017.pdf>.

¹⁸ Adrian Martin et al., *Justice and Conservation: The Need to Incorporate Recognition*, 197 Biological Conservation 254 (2016) <https://www.sciencedirect.com/science/article/pii/S0006320716301045>.

¹⁹ Robert R. Kuehn, *A Taxonomy of Environmental Justice*, 30 Envtl. L. Rep. 10681 (2000) <https://core.ac.uk/download/pdf/61689017.pdf>.

²⁰ *Id.* (internal citations omitted).

We now turn to the parallel (and halting) course of the federal government's actions with respect to environmental justice.

B. The Federal Government and Environmental Justice.

There is no legal definition of environmental justice because there is no federal statute governing environmental justice.²¹ Congress has considered environmental justice bills for decades without successfully passing any into law. Even so, environmental justice has permeated through the federal government.

The EPA spearheaded early federal work on environmental justice. In 1990, the George H.W. Bush EPA established an Environmental Equity Workgroup to examine environmental risks through the lens of race and class. The Workgroup published a report in 1992 that found that “[t]he evidence indicates that racial minority and low-income populations are disproportionately exposed to lead, selected air pollutants, hazardous waste facilities, contaminated fish tissue and agricultural pesticides in the workplace.”²² The report also expressed that “[i]t is a first step” and “[a]ny effort to address environmental equity issues effectively must include all segments of society.”²³ The Bush Administration also created in 1992 the EPA Office of Environmental Equity with the purpose of listening to communities, getting their concerns in front of policymakers, and providing grant money to local projects. This Office became today's EPA Office of Environmental Justice.²⁴ The EPA also established the National Environmental Justice Advisory Council (NEJAC) in 1993 to provide advice and recommendation on environmental justice.²⁵

The EPA has gone on to be the agency with the most expansive environmental justice program. EPA's definition of environmental justice therefore is a referential definition in the federal government. While its definition has also shifted over the years, EPA currently defines environmental justice as:

The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

Fair treatment means that no group of people should bear a disproportionate burden of environmental harms and risks, including those resulting from the negative environmental consequences of industrial, governmental, and commercial operations or programs and policies.

²¹ *The State of Environmental Justice: An Obama Administration Retrospective*, 47 *Env'tl. L. Rep.* 10385 (2017) <https://www.eli.org/sites/default/files/elr/featuredarticles/47.10385.pdf>.

²² U.S. EPA, *Environmental Equity, Reducing Risk for All Communities* (June 1992) <https://nepis.epa.gov/Exe/ZyPDF.cgi/40000JLA.PDF?Dockey=40000JLA.PDF>.

²³ *Id.*

²⁴ U.S. EPA, Environmental Justice, <https://www.epa.gov/environmentaljustice>.

²⁵ U.S. EPA, National Environmental Justice Advisory Council, <https://www.epa.gov/environmentaljustice/national-environmental-justice-advisory-council>.

Meaningful involvement means that people have an opportunity to participate in decisions about activities that may affect their environment and/or health; the public's contribution can influence the regulatory agency's decision; community concerns will be considered in the decision making process; and decision makers will seek out and facilitate the involvement of those potentially affected.²⁶

Environmental justice began to move beyond the EPA in 1994 when President Clinton issued the historic Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (hereinafter "EO 12898").²⁷ While the Executive Order did not explicitly define environmental justice, it still contributed to expanding the definition by not only recognizing the environmental burden on minority communities but low-income communities as well. EO 12898 directs agencies to make achieving environmental justice part of their missions "[t]o the greatest extent practicable and permitted by law..." "Its purpose is to focus federal attention on the environmental and human health effects of federal actions on minority and low-income populations with the goal of achieving environmental protection for all communities."²⁸ Importantly, it established the Federal Interagency Working Group on Environmental Justice (EJ IWG), which is comprised of 17 federal agencies and White House offices.²⁹ The EJ IWG is tasked with guiding, supporting, and enhancing federal environmental justice and community-based activities. At the time, then-EPA Administrator Carol Browner emphasized "I think it's important for people to understand that this is a first step... There are many, many more steps to come if we are really going to address the problems that these communities are raising."³⁰

While EO 12898 created no new substantive rights, it prompted discourse on how federal agencies could more broadly address environmental justice through existing laws. President Clinton helped prompt such discourse by issuing, along with EO 12898, a Memorandum on the Executive Order highlighting "existing law that can help ensure that all communities and persons across this Nation live in a safe and healthful environment."³¹ Specifically, the Memorandum noted the Civil Rights Act of 1964, the National Environmental Policy Act (NEPA), the Clean Air Act, and public information laws like the Freedom of Information Act. The Council on Environmental Quality then published Guidelines on Incorporating Environmental Justice into NEPA in 1997 to help agencies carry out EO 12898's mandates.³² Moreover, the end of the

²⁶ U.S. EPA, Learn About Environmental Justice, [epa.gov/environmentaljustice/learn-about-environmental-justice](https://www.epa.gov/environmentaljustice/learn-about-environmental-justice).

²⁷ Executive Order No. 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 59 Fed. Reg. 7,629 (1994) <https://www.archives.gov/files/federal-register/executive-orders/pdf/12898.pdf>.

²⁸ U.S. EPA, Summary of Executive Order 12898, <https://www.epa.gov/laws-regulations/summary-executive-order-12898-federal-actions-address-environmental-justice>.

²⁹ U.S. EPA, Federal Interagency Working Group on Environmental Justice (EJ IWG) <https://www.epa.gov/environmentaljustice/federal-interagency-working-group-environmental-justice-ej-iwg>.

³⁰ Talia Buford, ProPublica, *Has the Moment for Environmental Justice Been Lost?* (July 24, 2017) <https://www.propublica.org/article/has-the-moment-for-environmental-justice-been-lost>.

³¹ Memorandum for the Heads of All Departments and Agencies, Executive Order on Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (Feb. 11, 1994) https://www.energy.gov/sites/default/files/nepapub/nepa_documents/RedDont/Req-EO12898envjustice.pdf.

³² Council on Environmental Quality, *Environmental Justice Guidance Under the National Environmental Policy Act* (1997) https://www.epa.gov/sites/default/files/2015-02/documents/ej_guidance_nepa_ceq1297.pdf

Clinton administration saw the EPA and others questioning what additional authority existed for addressing environmental justice. Scholars and the EPA concluded that the concept of environmental justice was already embedded in environmental laws.³³

After this progress, specific adoption of policies that would forward environmental justice aims were effectively stalled (or at best placed far down federal priority lists) during the years of the George W. Bush Administration. Yet the concept was never erased out of the federal government. President Bush did not rescind EO 12898 and multiple times over the course of the Administration, the EPA reaffirmed the agency's commitment to environmental justice. What the Bush Administration, however, de-emphasized minority and low-income populations and focused instead on a concept of environmental justice that addressed national and regional populations rather than vulnerable communities.³⁴

Federal progress renewed as the Obama Administration revived and refocused the federal government's work on environmental justice. The Interagency Working Group on Environmental Justice reconvened for the first time in a decade and, in 2011, signed the Memorandum of Understanding of Environmental Justice and Executive Order 12898.³⁵ With this memorandum, federal agencies committed to develop environmental justice strategies and release annual implementation reports. For example, in 2016, the EPA published its EJ 2020 Action Agenda.³⁶

Significant actions President Obama took on environmental justice were related to the President's actions on climate change. The climate crisis is an environmental justice issue "[b]ecause the impacts are expected to, and in fact already do, hit lower-income communities and communities of color hardest."³⁷ President Obama recognized this in his Executive Order 13653, Preparing the United States for the Impacts of Climate Change, and EPA's final Clean Power Plan (CPP).³⁸

³³ See, Environmental Law Institute, *Opportunities for Advancing Environmental Justice: An Analysis of U.S. EPA Statutory Authorities* (2001) <https://www.epa.gov/sites/default/files/2015-02/documents/eli-opportunities4ej.pdf>; Memorandum from EPA Office of General Counsel to Office of Enforcement and Compliance Assistance, Office of Air and Radiation, Office of Solid Waste and Emergency Response, and Office of Water, EPA Statutory and Regulatory Authorities Under Which Environmental Justice Issues May Be Addressed in Permitting (2000) https://www.epa.gov/sites/default/files/2015-02/documents/ej_permitting_authorities_memo_120100.pdf; Richard Lazarus & Stephanie Tai, *Integrating Environmental Justice Into EPA Permitting Authority*, 18 Ecology L.Q. 617 (1999) <https://repository.law.wisc.edu/s/uwlaw/media/23239>.

³⁴ Clifford Villa, *Remaking Environmental Justice*, 66 Loy. L. Rev. 469 (2020), https://digitalrepository.unm.edu/cgi/viewcontent.cgi?article=1853&context=law_facultyscholarship; Mollie Soloway, *Measuring Environmental Justice: Analysis of Progress Under Presidents Bush, Obama, and Trump*, 51 Env'tl. L. Rep. 10038 (2021) https://digitalcommons.law.umaryland.edu/cgi/viewcontent.cgi?article=1060&context=student_pubs.

³⁵ Memorandum of Understanding on Environmental Justice and Executive Order 12898 https://www.energy.gov/sites/default/files/2017/04/f34/EJ_MOU_201108.pdf.

³⁶ U.S. EPA, *EJ 2020 Action Agenda* (2016) https://www.epa.gov/sites/default/files/2016-05/documents/052216_ej_2020_strategic_plan_final_0.pdf.

³⁷ Mollie Soloway, *Measuring Environmental Justice: Analysis of Progress Under Presidents Bush, Obama, and Trump*, 1 Env'tl. L. Rep. 10038 (2021) https://digitalcommons.law.umaryland.edu/cgi/viewcontent.cgi?article=1060&context=student_pubs.

³⁸ *Id.*

The Trump Administration again reversed course on environmental justice, to the detriment of many communities.³⁹ For example, President Trump rescinded President Obama’s Executive Order 13653. Yet even during the greatest roll back of environmental, public health, and social rights of modern times, EO 12898 remained.

In 2021, President Biden started his presidency with a focus on recommitting the federal government to environmental justice. One of President Biden’s early actions in office was to issue EO 14008.⁴⁰ This Executive Order directed federal agencies to develop programs, policies, and activities to address the disproportionate health, environmental, economic, and climate impacts on disadvantaged communities.

To secure an equitable economic future, *the United States must ensure that environmental and economic justice are key considerations in how we govern.* That means investing and building a clean energy economy that creates well-paying union jobs, *turning disadvantaged communities—historically marginalized and overburdened—into healthy, thriving communities*, and undertaking robust actions to mitigate climate change while preparing for the impacts of climate change across rural, urban, and Tribal areas. ***Agencies shall make achieving environmental justice part of their missions*** by developing programs, policies, and activities to address the disproportionately high and adverse human health, environmental, climate-related and other cumulative impacts on disadvantaged communities, as well as the accompanying economic challenges of such impacts. It is therefore the policy of my Administration *to secure environmental justice and spur economic opportunity for disadvantaged communities that have been historically marginalized and overburdened by pollution and underinvestment in housing, transportation, water and wastewater infrastructure, and health care.*

EO 14008 also established the White House Environmental Justice Advisory Council (WHEJAC) and replaced the EJ IWG created by EO 12898 with the Environmental Justice Interagency Council (IAC). WHEJAC is tasked with providing advice and recommendations on a whole-of-government approach to environmental justice. WHEJAC already published its first report in May 2021 on how federal investments can be made toward the goal of President Biden’s Justice40 Initiative – that 40% of the overall benefits go to disadvantages communities.⁴¹ In determining investment benefits for communities, WHEJAC identifies nuclear power as a type of project that will not benefit a community.⁴² In this report, WHEJAC also reworked EPA’s definition of environmental justice, changing “fair treatment” to “just

³⁹ Uma Outka & Elizabeth Kronk Warner, *Reversing Court on Environmental Justice under the Trump Administration*, 54 Wake Forest L. Rev. 101 (2019)
<https://dc.law.utah.edu/cgi/viewcontent.cgi?article=1173&context=scholarship>.

⁴⁰ 86 Fed. Reg. 7619 (2021).

⁴¹ White House Environmental Justice Advisory Council, *Final Recommendations: Justice40 Climate and Economic Justice Screening Tool & Executive Order 12898 Revisions* (May 21, 2021)
<https://www.epa.gov/sites/default/files/2021-05/documents/whiteh2.pdf>.

⁴² *Id.*

treatment” – “from equity, the even distribution of environmental amenities and harms, to justice, which ensures the conditions necessary for communities to thrive.”⁴³

In summary, over decades the federal government has progressed in advancing environmental justice in meaningful ways. Regrettably the NRC has lagged in this important process.

C. The NRC and the Public.

To understand how the NRC currently fails to address environmental justice, we examine how the NRC generally interacts with the public. First, without an environmental justice statute and without EO 13898 and EO 14008 creating new substantive rights, the NRC’s basic legal framework is what provides the scope of how the agency can address environmental justice. As we will show below, the Atomic Energy Act provides the NRC broad discretion to address public health and safety and a mandate to provide for public participation. Second, the public currently must bring environmental justice concerns to the attention of the NRC through the same processes as any other safety or environmental concern. Understanding the history and current public participation processes therefore provides a baseline for analyzing how the NRC addresses environmental justice and interacts with environmental justice communities.

Unfortunately, the NRC (and its precursor agency the Atomic Energy Commission) never lived up to the promise of public participation Congress laid out in the Atomic Energy Act. The uniform experience of the public is that the NRC processes are expensive, hyper-technical, and at root, an exercise in “checking the box” rather than meaningfully engaging with the public. In view of this, environmental justice issues will only be able to be seriously addressed when the agency alters its course in a host of areas and plainly demonstrates a commitment to meaningful public engagement. Here we present details in the history of the NRC’s handling of public participation.

1. The Atomic Energy Act provides discretion for public health and safety and mandates public participation.

The NRC’s authorizing statutes are the Atomic Energy Act of 1954 and Energy Reorganization Act of 1974. The Atomic Energy Act is the fundamental U.S. law on the uses of nuclear materials. As the NRC explains:

The Act requires that civilian uses of nuclear materials and facilities be licensed, and it empowers the NRC to establish by rule or order, and to enforce, such standards to govern these uses as ‘the [NRC] may deem necessary or desirable *in order to protect health and safety and minimize danger to life or property.*’⁴⁴

The Atomic Energy Act established a single agency, the Atomic Energy Commission, to both promote and regulate civilian and military uses of nuclear materials. Upon recognizing the

⁴³ Agya K. Aning, Inside Climate News, *The Biden Administration’s Embrace of Environmental Justice Has Made Wary Activists Willing to Believe* (Aug. 1, 2021) <https://insideclimatenews.org/news/01082021/biden-environmental-justice/>.

⁴⁴ U.S. NRC, Governing Legislation, <https://www.nrc.gov/about-nrc/governing-laws.html#atomic>. (emphasis added).

conflict of interest inherent in a single agency both promoting and regulating nuclear materials, Congress in the Energy Reorganization Act of 1974 split the Atomic Energy Commission's responsibilities. Now, the NRC is responsible for regulating civil nuclear materials under the Atomic Energy Act, while the Department of Energy is responsible for the development of nuclear weapons and promotion of nuclear power.

The Atomic Energy Act both grants the NRC wide deference to protect the health and safety of the public and mandates public participation in its processes. Congress in the Atomic Energy Act granted a “virtually unique” level of discretion to the NRC to define “adequate protection” for public health and safety.⁴⁵ To hold the agency accountable to its mission to protect public health and safety, Congress also in the Atomic Energy Act mandated the public's right to an adjudicatory hearing. “The establishment of a process for adversarial hearings and judicial review was the key feature of the grand bargain that Congress struck with state and local governments in 1954, when it passed the [Atomic Energy Act]. In legalizing domestic production of nuclear energy, Congress exempted the new industry from state and local regulation and vested it in a new federal agency... In exchange, Congress gave state and local governments and the general public an important legal tool: the right to challenge [NRC] licensing decision in an adjudicatory hearing.”⁴⁶

Thus, in enacting the Atomic Energy Act, Congress found that “regulation by the United States of the production and utilization of atomic energy and of the facilities used in connection therewith is necessary in the national interest to assure the common defense and security and *to protect the health and safety of the public*”⁴⁷ and that part of the purpose of the Atomic Energy Act is to create “[a] program to *encourage widespread participation* in the development and utilization of atomic energy for peaceful purposes to the maximum extent consistent with the common defense and security and *with the health and safety of the public.*”⁴⁸

The Atomic Energy Act gives the NRC uniquely broad discretion to issue rules to protect life and property. The Atomic Energy Act further provides that the Commission issue licenses only to those applicants “who agree to observe *such safety standards to protect health* and to minimize danger to life or property as the [NRC] may by rule establish.”⁴⁹ The NRC may require whatever information from an applicant “necessary in order to enable it to find that the utilization or production of special nuclear material will be in accord with the common defense and security and *will provide adequate protection to the health and safety of the public.*”⁵⁰

At the same time, the Atomic Energy Act confers the right to adjudicatory hearings. The Act mandates that the NRC “*shall grant a hearing* upon the request of any person whose interest may

⁴⁵ Richard Goldsmith, *Regulatory Reform and the Revival of Nuclear Power*, 20 Hofstra L. Rev. 159 (1991) <https://scholarlycommons.law.hofstra.edu/cgi/viewcontent.cgi?article=1728&context=hlr>.

⁴⁶ Letter from Diane Curran to U.S. NRC, Comments on NRC Public Participation Process (Feb. 26, 2013) (ADAMS Accession No. ML13057A975) *citing Nuclear Licensing and Regulatory Reform: Hearings Before Senate Subcommittee on Nuclear Regulation of the Senate Committee on Environment and Public Works*, 98th Cong., 1st Sess. 562 (1983) (Testimony of NRC Commissioner Peter Bradford).

⁴⁷ 42 U.S.C. 2012 (emphasis added).

⁴⁸ 42 U.S.C. 2013 (emphasis added).

⁴⁹ 42 U.S.C. 2133.

⁵⁰ 42 U.S.C. 2232 (emphasis added).

be affected by the proceeding, and *shall admit* any such person as a party to such proceeding.”⁵¹ The italicized portions of the excerpt clearly indicate that Congress intended this public hearing opportunity to be a non-discretionary duty of the NRC. The provision does not say the NRC “may” grant hearing requests from persons whose interests may be affected by its licensing and rulemaking proceedings. And it does not say the NRC “may” admit them as parties to licensing proceedings. In both instances it uses the non-discretionary term “shall.”⁵²

“The Agency’s ‘virtually unique’ substantive freedom was thus balanced by a virtually unique procedural responsibility.”⁵³ The NRC can use its virtually unique level of discretion to interpret the Atomic Energy Act to protect all aspects of public health and safety – including ensuring no disparate impacts to the most vulnerable communities. Further, with its mandate for public participation, the NRC can deeply engage with not just the public in general but also ensure procedural and recognitional environmental justice. Unfortunately, as we next describe, the agency has never lived up to its basic mandate to engage with the public and early on limited its own ability to engage on environmental justice.

2. The agency has never lived up to its mandate for public participation.

We won’t provide a full history of the Atomic Energy Commission and NRC treatment of public participation because it has evolved over time. But we do want to highlight that the history demonstrates that neither agency lived up to its statutory mandate to encourage public participation. Rather, to reuse an NRDC metaphor,⁵⁴ through its convoluted process rules, the NRC has built a big moat around itself in order to suppress meaningful public participation, and the reaction to the public trying to cross the moat has always been to make the moat wider and deeper; the agency has never taken advice to instead build a bridge. If the NRC genuinely wants to begin addressing environmental justice, this is a place where it will have to start.

Even in its founding, the Atomic Energy Commission “structured its licensing proceedings in a number of ways that operated to impair meaningful participation by the public,” including adopting an extremely formal model that drove up costs for intervenors, not allowing regulations to be challenged in individual licensing proceedings, and adopting a two-step decision process “that made a first-stage hearing available too soon to be meaningful, and a second-stage hearing too late.”⁵⁵

And when the public pushed back against the Atomic Energy Commission, the Commission’s response was to restrict public participation even further:

⁵¹ 42 U.S.C. 2239 (emphasis added).

⁵² Black’s Law Dictionary (defining “shall” as “Has a duty to; more broadly, is required to ... This is the mandatory sense that drafters typically intend and that courts typically uphold”).

⁵³ Richard Goldsmith, *Regulatory Reform and the Revival of Nuclear Power*, 20 Hofstra L. Rev. 159 (1991) <https://scholarlycommons.law.hofstra.edu/cgi/viewcontent.cgi?article=1728&context=hlr>.

⁵⁴ Christopher Paine, NRDC, *The Big Moat, How NRC Rules Suppress Meaningful Public Participation in NRC Regulatory Decision-making* (Jan. 31, 2013) (attached as Attachment A).

⁵⁵ Richard Goldsmith, *Regulatory Reform and the Revival of Nuclear Power*, 20 Hofstra L. Rev. 159 (1991) <https://scholarlycommons.law.hofstra.edu/cgi/viewcontent.cgi?article=1728&context=hlr>.

Prior to its demise, the [Atomic Energy Commission] had reacted to mounting public criticism, not surprisingly, by lashing out at its critics. Given the tendency of nuclear scientists and engineers to comprehend the problem of reactor safety primarily as technical, rather than political, Agency officials began to treat all criticism of nuclear regulation as if it came from a comparative handful of noisy and misguided members of a counter-culture that was perceived to be anti-technology and antigovernment. Public interventions in licensing proceedings, viewed in this light, were seen as guerilla attacks on nuclear power, intended to block a proposed nuclear facility by confronting the applicant with licensing delays that would raise plant costs prohibitively, rather than as good faith efforts to address a legitimate safety concern, and the Agency responded by attempting to curtail public participation in its licensing proceedings. *It sought to accomplish this essentially in two ways: first, by erecting procedural barriers to intervention in the form of tightened requirements for standing, pleading and discovery and second, by removing more issues from individual licensing proceedings and undertaking to resolve them either in generic proceedings or, in some cases, entirely outside any public hearing process.*⁵⁶

This reaction of responding to criticism by restricting public participation was not limited to the Atomic Energy Commission. For example, as licensing proceedings began to lengthen from an average of five years in 1968 to over ten years by 1981, the NRC's response was to blame public participation and to heighten its standing and contention admissibility requirements.⁵⁷

The reasoning given decade after decade by the NRC to justify the culling of public participation in its proceedings is that unsophisticated intervenors bring groundless claims that simply cause unnecessary delays to the licensing process. As noted legal and nuclear regulatory scholar Anthony Roisman put it, “[u]nderlying all of these policies [of the NRC] is a firm conviction, often masked but never fully hidden, at the highest levels of the NRC, that public participation is either a necessary evil foisted upon the agency by Congress in the original Atomic Energy Act or a public relations tool to be used as a way to convince the public that nuclear power plants are safe by allowing them to believe they are effectively participating in a process where they can see how well all legitimate concerns are addressed and resolved.”⁵⁸

We assert that no study has ever found support that intervenors delay licensing.⁵⁹ Rather, the evidence shows that licensing delays throughout the history of the nuclear industry stem from a series of other factors related to the industry itself, including: (1) real and significant problems with the design and construction of the units; (2) the filing of incomplete applications, thereby triggering numerous revisions, amended contentions, and long delays while the applicants

⁵⁶ *Id.* (emphasis added).

⁵⁷ NRC, *The History of Nuclear Regulatory Commission Standing and Contention Admissibility Standards Promoting Effective and Efficient Public Participation* (2013) (ADAMS Accession No. ML13009A258).

⁵⁸ Anthony Z. Roisman et al., *Regulating Nuclear Power in The New Millennium (The Role of The Public)*, 26 Pace Envtl. L. Rev. 317 (2009) <https://digitalcommons.pace.edu/cgi/viewcontent.cgi?article=1022&context=pehr>.

⁵⁹ See Testimony of Peter A. Bradford, Nuclear Regulatory Commission Oversight Hearing, Senate Committee on Environment and Public Works, Subcommittee on Clean Air and Nuclear Safety (May 5, 2010) https://www.epw.senate.gov/public/_cache/files/d/9/d9898710-1243-464a-886c-6b5cac28519b/01AFD79733D77F24A71FEF9DAFCCB056.bradfordfulltestimony.pdf.

supplied information responsive to the Staff's queries; (3) chaotic record-keeping of inspection and test results essential to a determination that the plant would be safe to operate that NRC staff have rightly found necessary; (4) the need to incorporate safety upgrades; and (5) managerial incompetence on a grand scale.⁶⁰

So while the NRC's response to difficulties in the nuclear industry has been to continually limit public participation, heightened intervention requirements have not lead to any increase in nuclear facility licensing. Rather, the early 2000s also saw a nuclear "renaissance" that failed to occur primarily because of economic factors.⁶¹ Moreover, as will next be discussed, public participation has shown to be beneficial.

3. Public participation has shown to be beneficial.

Public participation has been shown to be valuable in revealing potential safety and environmental weaknesses of nuclear facilities. For decades, the NRC has gotten advice to ease standards for public participation. Thus far, the agency has failed to take this advice seriously.

Of foremost importance here, meaningful public participation is a fundamental element of procedural environmental justice. "If everyone has the opportunity to participate in environmental decision-making (procedural environmental justice), each person has the opportunity to defend her own and everyone else's substantive environmental rights. Therefore, it is likely to be more difficult to impose unfair environmental burdens (substantive environmental injustice) on people through a just procedure than it is through an unjust procedure."⁶²

Second, as Professor Richard Goldsmith wrote in 1991, "[r]eviving public 'confidence' in 'nuclear safety' ... requires the restoration of public confidence in 'nuclear regulation,' and the history of nuclear regulation in this country teaches that such confidence cannot be obtained if the public is excluded from the licensing process."⁶³ This statement remains true today. No

⁶⁰ See Anthony Z. Roisman et al., *Regulating Nuclear Power in The New Millennium (The Role of The Public)*, 26 Pace Env'tl. L. Rev. 317 (2009) <https://digitalcommons.pace.edu/cgi/viewcontent.cgi?article=1022&context=pehr>; Christopher Paine, NRDC, *The Big Moat, How NRC Rules Suppress Meaningful Public Participation* (Jan. 31, 2013) (attached as Attachment A).

⁶¹ While the NRC received 19 applications during this so-called "renaissance," as of today, not a single new reactor has come online. The proposed Florida Levy County Nuclear Plant cost projects ballooned to \$22 billion before the project was canceled in 2017. The South Carolina VC Summer plant was abandoned after \$9 billion was invested (the project has also led to multiple federal indictments, including for fraud and conspiracy). And the Georgia Vogtle plant is years behind schedule and projected to cost twice its original budget, for a final price tag close to \$30 billion.

⁶² Newcastle & Oxford Universities, Global Justice and the Environment, What is Environmental Justice (2007) https://www.staff.ncl.ac.uk/g.m.long/environmental_justice.html.

⁶³ Anthony Z. Roisman et al., *Regulating Nuclear Power in The New Millennium (The Role Of The Public)*, 26 Pace Env'tl. L. Rev. 317 (2009) <https://digitalcommons.pace.edu/cgi/viewcontent.cgi?article=1022&context=pehr> citing Richard Goldstein, *Regulatory Reform and the Revival of Nuclear Power*, 20 Hofstra L. Rev. 159 (1991) <https://scholarlycommons.law.hofstra.edu/cgi/viewcontent.cgi?article=1728&context=hlr>.

community will ever trust the NRC if they are not part of the decision-making process. At no point has the Commission fully embraced this advice.

Moreover, the public is correct in its judgement. We are not voicing a novel, or even remotely new concern here. In 1974, while still part of the Atomic Energy Commission, members of the former Appeal Board observed: “Public participation in licensing proceedings not only can provide valuable assistance to the adjudicatory process, but on frequent occasions demonstrably has done so. It does no disservice to the diligence of either applicants generally or the regulatory staff to note that many of the substantial safety and environmental issues which have received the scrutiny of licensing boards and appeal boards were raised in the first instance by an intervenor.”⁶⁴ Intervenors have brought to the NRC’s attention significant safety and environmental concerns. For example, during the licensing of the Three Mile Island nuclear power plant, intervenors accurately predicted deficiencies that would occur during the Three Mile Island accident years later.⁶⁵

This type of example made many advisory committees after the accident clearly articulate strong recommendations for increasing public participation.⁶⁶ Just after the March 28, 1979 accident at Three Mile Island, the NRC instituted an independent “Special Inquiry” to review and report on the accident.⁶⁷ The charge from the NRC was initially straightforward and seemingly direct: “[t]he principal objectives of the inquiry were to determine what happened and why, to assess the actions of utility and NRC personnel before and during the accident, and to identify deficiencies in the system and areas where further investigation might be warranted.”⁶⁸ But as the authors of the Special Inquiry noted, the then NRC Commission suggested a deeper push – “[w]hile our inquiry was specifically focused on the accident at Three Mile Island, we were asked to reach conclusions and to make recommendations with a broader sweep than the accident itself.”⁶⁹

To that end, the Special Inquiry identified a host of technical and safety process flaws, but also made searching recommendations that are centered on the NRC’s interaction with the public and the failures of the then new agency to meaningfully allow for public participation in its proceedings, all to the detriment of safety and the public trust. The Special Inquiry spoke plainly that “insofar as the licensing process is supposed to provide a publicly accessible forum for the resolution of all safety issues relevant to the construction and operation of a nuclear plant, it is a sham.”⁷⁰

Fifty years on, recommendations from the Special Inquiry are prescient. Specifically, in its recommendations to overhaul the licensing process, the Inquiry recommended both the

⁶⁴ Letter from Diane Curran to U.S. NRC, Comments on NRC Public Participation Process (Feb. 26, 2013) (ADAMS Accession No. ML13057A975).

⁶⁵ The President’s Commission on the Accident at Three Mile Island, *Report of the Office of Chief Counsel on Emergency Preparedness* (Oct. 1979) <https://www.osti.gov/servlets/purl/1465979>.

⁶⁶ *Id.*; U.S. General Accounting Office, *Three Mile Island: The Most Studied Nuclear Accident in History* (Sept. 9, 1980) <https://www.gao.gov/assets/emd-80-109.pdf>.

⁶⁷ Mitchell Rogovin and George Frampton, *Three Mile Island, a Report to the Commissioners* (Apr. 5, 1979) <https://www.osti.gov/servlets/purl/5395798>.

⁶⁸ *Id.* at ix.

⁶⁹ *Id.* at x.

⁷⁰ *Id.* at 139.

establishment of an “Office of Public Counsel” *and* direct funding of intervenors to participate in the licensing process. The Special Inquiry recommended in full part:

First, we recommend that an Office of Public Counsel be established which should report to the head of the agency. The primary function of the office should be to:

- Provide a source of legal and technical counsel to potential or actual intervenors and to public interest groups, whether opposed to or supportive of nuclear power in general or a specific application in particular.
- Intervene directly as a party in agency rulemaking or licensing proceedings, when appropriate, to assure that all necessary safety issues are fully considered.
- Fund and monitor, where appropriate, independent technical peer review by independent outside experts.
- Handle details of the intervenor financing suggested below.

This office, removed from licensing, enforcement, and standards setting, should consist of a number of people whose expertise would encompass the technical disciplines and legal talents essential to the regulatory process. The office itself would be empowered to intervene in any proceeding where it perceived that neither the NRC staff nor any intervenor was adequately raising important issues relating to safety. Given adequate staffing and the clear support of the highest level of the agency, the Office of Public Counsel would enhance the Commission’s credibility with both the industry and the public.

INTERVENOR FUNDING

Second, the problem of providing for increased public involvement in the decisionmaking process cannot be separated from the question of providing public funding for such activity. If citizens or groups contribute materially to rulemaking or licensing efforts by pressing significant concerns that are not being urged by other parties, they should be reimbursed for their expense. Other agencies have programs to fund citizen participation and even, as under the Clean Air Act and Federal Water Act, citizen lawsuits. We recommend that a program of such citizen or interest group funding be adopted, for both licensing and rulemaking proceedings, that would permit intervenors who make substantive contributions that would otherwise not have been made to be compensated for the expenses involved. This program could be administered through the Office of Public Counsel, with the final decision as to reimbursement being made either by that office, the Licensing Board or, in rulemaking proceedings, by the Commission or Administrator.⁷¹

⁷¹ *Id.* at 143-44.

While some safety proposals were adopted, the NRC failed entirely to adopt any of the Special Inquiry's public participation recommendations.

Even though the agency has been (sometimes loudly) told for decades the benefits of public participation, as we will discuss next, the agency has failed to increase participation rights.

4. Public participation before the NRC today.

Former Commissioner Bradford has explained: "A potential weakness of most regulatory processes – in banking, housing, coal mine safety and oil drilling, as well as nuclear regulation – is the extent to which they rely almost exclusively on information provided by the regulated entities. To some extent, this is inevitable, but if regulators compound it by treating other potential sources of information – citizen groups, whistleblowers, state governments – with hostility, they are asking for trouble." Unfortunately, this is exactly what the NRC has done.

First, it should be noted that the only meaningful type of public participation in a licensing proceeding before the NRC is as an intervenor with party status in an adjudicatory hearing. The NRC often puts forward other means of public input on agency actions, like opportunities to provide written comments on applications or participate in NRC-hosted meetings, as though they are the equivalent or supplemental to the hearing process.⁷² They are not. The agency can simply ignore comments because there is no mechanism by which the public can hold the agency accountable to them. "Only in a licensing proceeding does the applicant or the NRC Staff bear the burden of proving the adequacy of a license application to satisfy those statutes. Only in an NRC adjudicatory hearing is a license application subject to the rigors of the adversarial hearing process as a matter of right. And only in an NRC licensing proceeding can the ultimate decision be appealed to the U.S. Court of Appeals, where the NRC must demonstrate it has satisfied statutory requirements for protection of public health and safety, security and the environment."⁷³

Thus, next, we turn to the NRC's current licensing procedure. In 2013, the NRDC was invited before the Commissioners to provide our views on the topic of public participation rules in licensing proceedings. That explanation remains, unfortunately, just as relevant today:

In setting forth the basis for our view that there is a pervasive bias in NRC rules against public intervenors, I begin with the hearing request process itself. Following the Notice of Opportunity for hearing in the Federal Register, a prospective petitioner who believes [s]he may have an affected interest in the proceeding has only 60 days in which to: (1) study the voluminous license application and draft environmental report; (2) investigate any safety and/or environmental concerns they have identified in the report; (3) document his/her standing to pursue these concerns; (4) draft admissible safety and/or environmental contentions; (4) seek out

⁷² See e.g., NRC, *The History of Nuclear Regulatory Commission Standing and Contention Admissibility Standards Promoting Effective and Efficient Public Participation* (Jan. 2013) (ADAMS Accession No. ML13009A258).

⁷³ Letter from Diane Curran to U.S. NRC, Comments on NRC Public Participation Process (Feb. 26, 2013) (ADAMS Accession No. ML13057A975).

technical declarations from experts to support these contentions, (5) hire expert legal counsel to frame “with specificity” the contentions and their legal bases in ways that satisfy all the “strict-by-design” pleading requirements of 2.309(f). All this, within 60 days. It’s little wonder that few prospective public intervenors are able to surmount these initial obstacles, and most don’t even try.

Meanwhile, long before the hearing notice, the Staff will have been engaged with the Applicant in a multi-month to multi-year iterative coaching process with respect to the forthcoming application, including numerous exchanges of proprietary documents not available to the Petitioner. But despite its superior access to information and expertise regarding the application, the Staff is excused from taking a position on the application until it issues its final environmental report and final safety evaluation, which often occurs a year or more after the first notice of opportunity for hearing is filed.

So the Petitioner—the prospective party to the proceeding with the least information about the docketed application—is required to demonstrate in advance, with “particularity,” and prior to discovery or mandatory disclosures of any kind, that it has a case of sufficiently substantive merit that it should be allowed to proceed to a hearing. This is a high burden and one that has been contentiously wrangled over in numerous ASLB and Commission decisions. Meanwhile the Staff, which is far better informed about the application, is allowed to withhold significant elements of its analysis regarding the application.

While it’s true that once a contention is accepted, the Staff is under obligations to produce documents pursuant to both 10 C.F.R. § 2.336(b) and § 2.1203, such a situation emerges only after Staff has joined industry in opposing admission of the contention in the first instance. And while some of what transpires between applicant and staff prior to the admission of a contention is potentially available, albeit through unreliable searches on ADAMS, the significant burdens of tracking items of interest in a sea of paper rests entirely on the public (and for the long stretch of time when it’s not apparent whether the application will even be filed). And reiterating the point above, the Staff generally joins the Applicant in opposing the petitioners’ proposed contentions for failing to satisfy each of the requirements (i)-(vi) in §2.309 (f). Further, even when the Staff agrees with the Applicant’s position in all significant respects, Staff is entitled to file its own briefs and motions aimed at excluding the petitioner, to which the petitioner must respond, so it is two-against-one from the very outset.

With the Staff and applicant both working to demonstrate the petitioners’ inability to satisfy the “strict-by-design” contention admissibility requirements of 10 C.F.R. § 2.309(f), the rules of the game as described above place heavy burdens and expense on any citizen petitioner, but especially on those without financial resources and specialized legal representation. Other inequities exist as well. On

the one hand, the content of a petitioner's initial pleading is essentially frozen based on the limited information available to it within the 60-day window (following a hearing opportunity notice), a window that is realistically somewhat shorter given the need to "fly-speck" the petition into final form so that it is not tripped-up by technicalities. On the other hand, it is common that the docketed application continues to evolve, as the applicant responds to Requests for Additional Information (RAIs) from the Staff, and/or the Applicant amends the application to fill gaps in the version that was initially accepted for docketing.

There are no restrictions on when, or how many times, an applicant may file a license amendment, or when the Staff must complete its safety and environmental reviews, or the number of supplements it may file to its environmental analysis. But under the current rules, any admitted or prospective intervenor desiring to take issue with a late-filed license amendment, or additional information supplied by the Applicant, bears the asymmetrical burden of having to file a motion with the Board, typically within ten days of the "triggering event," justifying each such "late-filed" contention by addressing eight separate factors that the Board must "balance" in determining whether or not it should be admitted.

Assume for a moment that a petitioner surmounts all these hurdles and convinces a licensing board to grant standing and at least one admissible contention – a fairly rare event, statistically speaking. What happens then? Under current rules, the Applicant is entitled to an immediate interlocutory appeal of the board's ruling to the Commission on the question of whether the petition should have been wholly denied (but the intervenor has no right to appeal unless the entire petition was denied, essentially leaving rejected contentions for review only after the entire hearing process has been completed), and here again the Staff is allowed to weigh-in as though it were a separate party, but invariably, aligning itself with the applicant.

This second round of double-teaming means more briefing and more legal expenses for petitioners who, should they finally prevail on these preliminary matters, still find themselves just at the starting line of a proceeding on the substantive merits of their contention(s), but having already spent many tens of thousands of dollars. All this unproductive procedural wrangling consumes many months or even years, taxing the resources of all parties involved, but especially citizen intervenors, while taxpayers (via applicants' tax-deductible litigation expenses), electricity users, including intervenors (via electricity rates) and mandatory fees from license holders finance a veritable beehive of legal talent to represent nuclear licensees and the Staff.⁷⁴

⁷⁴ Christopher Paine, NRDC, *The Big Moat, How NRC Rules Suppress Meaningful Public Participation* (Jan. 31, 2013) (attached as Attachment A).

Many of the specific limitations the NRC places on environmental contentions brought before the NRC under NEPA are also wholly problematic:

Another example of the absurdity of the “strict by design” procedural rules for intervenors and the need to seek leave to file a “late filed contention” every time new information is released, is the rule applied to challenges to the NRC Staff’s environmental impact statement. Pursuant to the National Environmental Policy Act (NEPA), every major federal action, which includes decisions to license or relicense a nuclear power plant, must be preceded by an environmental impact statement. The final is always preceded by a draft on which public comments are submitted. Common sense would say that a concerned member of the public should participate in the impact statement process by filing comments on the draft but waiting to file any contentions challenging the impact statement only after the agency has had a chance to consider the comments and to issue its final impact statement, modified as it sees fit by considering the public comments. However, the NRC position, relying on 10 C.F.R. § 2.323(a), is that all contentions challenging the impact statement are untimely if they are not filed shortly after the draft impact statement is issued or unless the final impact statement contains positions not previously identifiable from the draft. If, in the final impact statement, the NRC modifies the draft impact statement such that the initial contention is no longer accurate, the intervenor must file a new contention and meet all the special rules for filing such a new contention.

Pursuant to 10 C.F.R. § 2.309(f)(2), environmental contentions arising under NEPA must be based on the environmental report filed by the applicant, even though the obligations imposed on the applicant are those contained in the NRC Regulations, 10 C.F.R part 51 and not those contained in NEPA. When the NRC Staff issues a draft impact statement under NEPA, contentions can be based on the draft only if it can be shown that they are based on information or conclusions that differ significantly from the information contained in the applicant’s environmental report. However, a contention that challenges the applicant’s environmental report because it does not comply with NEPA is rejected because an applicant cannot be required to comply with NEPA. So, how does a NEPA challenge become a contention if the Staff merely parrots what the applicant has said in the environmental report?⁷⁵

With such a convoluted process, it is no wonder then that there is broad public perception that the public participation process of the NRC is miserably deficient. This feeling has only lingered and, frankly, grown and hardened over the years. A recent report by the Harvard Negotiation and Mediation Clinical Program highlighted this feeling and how NRC’s procedures play into it.⁷⁶ The Harvard Clinical Program reported:

⁷⁵ Anthony Z. Roisman et al., *Regulating Nuclear Power in The New Millennium (The Role of The Public)*, 26 Pace Envtl. L. Rev. 317 (2009) <https://digitalcommons.pace.edu/cgi/viewcontent.cgi?article=1022&context=pehr>.

⁷⁶ Harvard Negotiation & Mediation Clinical Program, *Moving Toward a Framework for Contested Hearings in the Licensing of Advanced Reactors* (June 2021) (ADAMS Accession No. ML21173A166).

- “[T]he procedures interact like a succession of booby traps designed to ensure that most petitioners and most of the concerns they raise are either barred from a hearing at the outset or fall by the wayside along the path to a hearing.”
- “[T]he current suite of NRC rules disempowers citizens who are concerned enough about protecting their communities and natural resources that they seek to have their concerns adjudicated within the NRC’s licensing process.”
- “Stakeholders of all stripes were unified in their criticism of the length, cost, and complexity of the contested hearing process.”
- An NRC Staff Member said, “There are lots of persnickety NRC specific rules that make it difficult even for seasoned attorneys to know the procedures without experience.”⁷⁷

In summary as the NRC’s current procedures stand, it is profoundly difficult, complicated, and expensive for an intervenor – even well-resourced, committed advocacy organizations – to have thorough and meaningful opportunities to adjudicate fully a contention in a licensing process. It is therefore a hard barrier for an environmental justice community – who often lack the time; the substantial technical, legal, or financial resources, and the direct line to political or social power beyond that of grassroots social activism – to succeed in engagement with the NRC.

From this baseline of how the NRC suppresses general public participation and input, we will next see how the NRC has made the process specifically for addressing environmental justice concerns more difficult.

D. The NRC and Environmental Justice.

Every step of the nuclear fuel chain implicates environmental justice: from uranium mining, conversion, and enrichment, to energy production, to waste storage, transportation, and disposal.⁷⁸ A single vulnerable community may, and often is targeted to, bear the burden from multiple stages of the chain.⁷⁹ Yet in looking at the NRC, an agency whose mission explicitly includes protecting the public health and the environment, the significance of environmental justice in the nuclear fuel chain is not apparent. Over the course of its history, the NRC has failed to address environmental justice.

When President Clinton published EO 12898, the NRC presumed that, as an independent agency, it was not bound by the Executive Order. Nevertheless, the NRC wrote to President Clinton that it would “endeavor to carry out the measures set forth in Executive Order 12898.”⁸⁰

⁷⁷ *Id.*

⁷⁸ Dean Kyne and Bob Bolin, *Emerging Environmental Justice Issues in Nuclear Power and Radioactive Contamination*, 13 Int’l J. Env’tl. Res. & Pub. Health 700 (2016) <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4962241/>; Eric Jantz, *Environmental Racism with a Faint Green Glow*, 58 Nat. Resources J. 247 (2018) <https://digitalrepository.unm.edu/nrj/vol58/iss2/12/>.

⁷⁹ For example, New Mexico was a primary site of uranium mining and now is the focus for hosting nuclear waste, even though the state has never benefitted from nuclear power itself. See NRDC, *Nuclear Fuel’s Dirty Beginnings* (2012) <https://www.nrdc.org/sites/default/files/uranium-mining-report.pdf> and Sammy Feldblum and Tovah Strong, *New Mexico Eyed for Major Nuclear Waste Storage Facility* (Feb. 5, 2021) <https://www.hcn.org/articles/pollution-new-mexico-eyed-for-major-nuclear-waste-storage-facility>.

⁸⁰ Letter from Ivan Selin to the President (Mar. 31, 1994) (ADAMS Accession No. ML033210526).

Thus, in 1995 the NRC published its first Environmental Justice Strategy.⁸¹ The majority of the 1995 Strategy provides an early, limited perspective for the NRC on environmental justice. For example, the Strategy includes such goals as senior management involvement, openness and clarity, seeking and welcoming public participation, and continuing to review and monitor Title VI activities. However, in one decision the 1995 Strategy significantly and lastingly damaged the agency's ability to address environmental justice. In explaining that "the NRC is not a 'land management' agency, i.e., it neither sites, owns, nor manages facilities or properties," the agency focused on a narrow aspect of environmental justice – the siting of hazardous facilities. While studies in the 1980s and early 1990s also focused on the unequal siting of hazardous facilities (*supra* at 4&7), the environmental justice concept and EO 12898 already had moved beyond that narrow view of environmental justice to incorporate distributive and procedural justice. But based on its assessment of environmental justice as only concerning siting decisions, the NRC concluded that EO 12898 "primarily apply to our efforts to fulfill the requirements of the National Environmental Policy Act (NEPA)." This determination ignored the NRC's broad statutory authority under the Atomic Energy Act to protect the public health and safety (*supra* at 11-13). Thus, from the start of considering environmental justice, the NRC tied its hands behind its back.

The limits of the 1995 Strategy, and the extent to which the NRC was not ready or truly willing to listen to environmental justice concerns, would become apparent when environmental justice came for the NRC through the adjudicatory door. Intervenors brought environmental justice concerns to the NRC through the adjudicatory process because that was the only viable option to meaningfully raise these concerns. Thus, the NRC first took a hard look at environmental justice in 1998 in *Louisiana Energy Services* (LES).⁸²

In LES, the applicant sought a license to construct and operate a uranium enrichment facility. The applicant proposed to build its uranium facility in Claiborne Parish, Louisiana, home to one of the poorest and most disadvantaged populations in the United States.⁸³ Moreover, it proposed to build the facility between two unincorporated communities with a population that was 97% African American. The two communities were connected by a Parish Road that also bisected the property on which the applicant proposed to build its uranium facility.

A local citizens group, Citizens Against Nuclear Trash (CANT), challenged the license application. CANT brought two environmental justice complaints. It argued that the applicant had not adequately considered the economic and social costs of closing the Parish Road connecting the two rural Black communities. Moreover, CANT argued that the process to decide the location for the uranium facility followed the (now nationally recognized) unjust precedent of siting hazardous facilities in minority communities. CANT accused the NRC and applicant of taking no steps to mitigate the disparate impact on the communities in Claiborne Parish.

In support of its claim of racist intent in the siting location, CANT presented statistical evidence that showed that as the site selection process narrowed from national to state to regional to local, the level of poverty and African American representation in the population rose dramatically,

⁸¹ U.S. NRC, Environmental Justice Strategy (1995) (ADAMS Accession No. ML20081K602).

⁸² *Louisiana Energy Services* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77 (1998).

⁸³ *Louisiana Energy Services* (Claiborne Enrichment Center), LBP-97-8, 45 NRC 367, 371 (1997).

“until it culminated in the selection of a site with a local population that is extremely poor and 97% African American.”⁸⁴

Based on the evidence presented, the Licensing Board found that racial discrimination was relevant to the adequacy of the NEPA analysis and denied the license without prejudice. The Board called for the NRC Staff to conduct an “objective, thorough, and professional investigation” into potential racial discrimination in the siting.⁸⁵

But on appeal, the Commission reversed the Licensing Board on the basis that NEPA is not a tool for investigating racial discrimination.⁸⁶ Rather, the Commission explained that “disparate impact” is the primary tool for advancing environmental justice under NEPA because “the NRC’s goal is to identify and adequately weigh, or mitigate, effects on low-income and minority communities that become apparent only by considering factors peculiar to those communities.”⁸⁷ The Commission concluded that the “only ‘existing law’ conceivably pertinent here is NEPA and explained that “[u]nder NEPA, agencies are required to consider not only strictly environmental impacts, but also social and economic impacts ancillary to them. But nothing in NEPA or in the cases interpreting it indicates that the statute is a tool for addressing problems of racial discrimination.”⁸⁸

While the Commission rejected a review of the wider issue of discrimination in the siting of the facility, the Commission upheld the Board’s requirement that the NRC Staff review the impacts the project would have due to closing the road connecting the two towns.

The Commission next considered EO 12898 in 2002 in *Private Fuel Storage (PFS)*.⁸⁹ This case involved the construction and operation of a spent nuclear fuel storage facility on Tribal Reservation land leased from the Skull Valley Band. A separate group of Tribal members opposed to the usage of the Reservation for this facility intervened in the proceeding. A central contention was whether Tribe members who opposed the project might suffer environmental impacts without enjoying its financial benefits. The Licensing Board found that “since the proceeds from the [facility] lease were not used to benefit all tribal members, a minority subgroup of the tribe might suffer disproportionate environmental impacts from the project, reasoning that this minority would suffer the same environmental burdens as the rest of the tribal members but receive none or fewer of the mitigating financial benefits.”⁹⁰

The Commission reversed and concluded that this claim also did not fall within NEPA. The Commission explained that the “essence of an environmental justice claim, in NRC practice, is disparate environmental *harm*” but the Tribe’s claim “focused on disparate *economic benefits*,

⁸⁴ *Id.* at 386.

⁸⁵ *Id.* at 391.

⁸⁶ Louisiana Energy Services (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77 (1998). And not to belabor the point or relitigate matters here, NRDC notes that the Commission’s reversal in this matter ran precisely counter to its already crabbed interpretation of E.O. 12898.

⁸⁷ *Id.* at 100.

⁸⁸ *Id.* at 101.

⁸⁹ Private Fuel Storage. L.L.C. (Independent Spent Fuel Storage Installation), CLI-02-20, 56 NRC 147 (2002).

⁹⁰ Eric Jantz, *Environmental Racism with Faint Green Glow*, 58 Nat. Resources J. 247 (2018)

<https://digitalrepository.unm.edu/nrj/vol58/iss2/12/>.

not on disparate environmental effects.”⁹¹ The Commission also reiterated its narrow view of its responsibility under NEPA simply “to become aware of the demographic and economic circumstances of local communities where nuclear facilities are to be sited, and take care to mitigate or avoid special impacts attributable to the special character of the community.” Thus, “[d]espite the Commission’s recognition that environmental harm is NEPA’s ‘core interest, it determined that while NEPA allows consideration of socioeconomic costs and benefits, that consideration is limited and the investigation of the alleged financial misdeeds of the tribal chairman went beyond NEPA’s environmental scope.”⁹²

Following these licensing proceedings, in November 2003, the NRC determined it needed a new environmental justice policy statement, explaining that “[r]ecently, questions have been raised concerning the Commission’s responsibilities under E.O. 12898. In light of the previous adjudications, the Commission sees a need, and thinks it appropriate, to set out its views and policy on the significance of the E.O. and guidelines of when and how EJ will be considered in NRC’s licensing and regulatory actions.”⁹³

Coincidentally, the Nuclear Energy Institute (NEI) had just sent the NRC a letter criticizing its recent decisions in LES and PFS and requesting the NRC issue a new policy statement on environmental justice based on NEI’s erroneous claim that: “the Executive Order does not provide a legal basis for contentions based on environmental justice allegations to be litigated in NRC licensing proceedings.”⁹⁴ As Public Citizen pointed out at the time, the NRC’s draft policy statement stepped back from addressing environmental justice and instead appropriated many of NEI’s arguments and recommendations.⁹⁵

In developing what would become the 2004 Policy Statement on the Treatment of Environmental Justice Matters in NRC Regulatory and Licensing Actions (hereinafter “2004 Policy Statement”),⁹⁶ the NRC ignored basic tenants of environmental justice – such as the community speaks for itself and must be part of the decision-making process – and did not engage with the community as a partner. The NRC explained that it instead simply “incorporate[d] past Commission decisions in LES and PFS, staff environmental guidance, as well as Federal case law on environmental justice.”⁹⁷ The sole basis for community participation in the process was a single opportunity to comment on the draft. But even though the NRC received more than 700 comments opposing the draft policy, the NRC ignored this input. The

⁹¹ Private Fuel Storage. L.L.C. (Independent Spent Fuel Storage Installation), CLI-02-20, 56 NRC 147, 153 (2002) (emphasis added).

⁹² Eric Jantz, *Environmental Racism with A Faint Green Glow*, 58 Nat. Resources J. 247, 264 (2018) (internal citations omitted) <https://digitalrepository.unm.edu/nrj/vol58/iss2/12/>.

⁹³ U.S. NRC, Policy Statement on the Treatment of Environmental Justice Matters in NRC Regulatory and Licensing Actions, 68 Fed. Reg. 62,642, 62,643 (Nov. 5, 2003) <https://www.govinfo.gov/content/pkg/FR-2003-11-05/pdf/03-27805.pdf>.

⁹⁴ Letter from Nuclear Energy Institute to NRC, Environmental Justice (Dec. 20, 2002) (ADAMS Accession No. ML030220012) <https://www.nrc.gov/docs/ML0302/ML030220012.pdf>.

⁹⁵ Letter from Public Citizen to NRC, Public Citizen comments on the draft “Policy Statement on the Treatment of Environmental Justice Matters in NRC Regulatory and Licensing Actions” (Feb. 3, 2004) (ADAMS Accession No. ML040350248).

⁹⁶ 2004 Policy Statement, 69 Fed. Reg. 52040 (Aug. 24, 2004).

⁹⁷ *Id.*

2004 Policy Statement was so counter to the prevailing development of law and policy in nearly every other area of federal and state government that the Bush Administration EPA even criticized it, most importantly on the Policy Statement's treatment of racial motivation:

We disagree that issues of "fairness and equity" are "contrary to NEPA and the E.O.'s limiting language emphasizing that it creates no new rights." Draft Policy at 7. It is our position that such issues may be addressed under the "social" or "cultural" impact criteria under 40 CFR 1508.8, to the extent that they are related to an environmental impact. Moreover, to the extent that cumulative impacts are, at times, best understood in their social or historical context, issues of fairness and racial motivation have special relevance. We would concur, however, that issues of intentional discrimination are also relevant under laws other than NEPA.

And on environmental assessments:

Proscribing mention of environmental justice in Environmental Assessments (EAs) or in Findings of No Significant Impact (FONSIs), except under unusual circumstances, deviates from the spirit of the Executive Order, and the express language of both the Presidential Memorandum accompanying the Executive Order and the CEQ's Guidance. Moreover, as a matter of policy soliciting public comment with respect to environmental justice issues during the EA process would help ensure that the Commission has not inadvertently neglected to identify or properly assess an impact to a differently situated population.⁹⁸

Simply, the 2004 Policy Statement contains significant problems. It "suggest[ed] a retreat from the basic principles" of environmental justice.⁹⁹ The backwards trajectory of the Statement is exemplified in the Statement's failure to acknowledge or build upon the NRC's existing environmental justice goals from the 1995 Environmental Justice Strategy, which would have been a small but at least respectable foundation for the NRC to work off.¹⁰⁰

Rather, the 2004 Statement is less a policy on how to address environmental justice than a doctrine of confining the NRC from addressing environmental justice. For example, and contrary to CEQ Guidance – which states that "[e]nvironmental justice issues may arise at any step of the NEPA process and agencies should consider these issues at each and every step of the process, as appropriate" – the Policy Statement restricts the NRC to generally not analyze environmental

⁹⁸ U.S. EPA, Nuclear Regulatory Commission's (NRC) Proposed Policy Statement on the Treatment of Environmental Justice in Matters in NRC's Regulatory and Licensing Actions – Comments (Feb. 4, 2004) (ADAMS Accession No. ML040970507).

⁹⁹ Letter from Public Citizen to NRC, Public Citizen comments on the draft "Policy Statement on the Treatment of Environmental Justice Matters in NRC Regulatory and Licensing Actions" (Feb. 3, 2004) (ADAMS Accession No. ML040350248).

¹⁰⁰ The four goals in the 1995 Environmental Justice Strategy are: (1) integration of environmental justice into NRC's NEPA activities; (2) continue senior management involvement; (3) openness and clarity; and (4) seeking and welcoming public participation. U.S. NRC, Environmental Justice Strategy (1995) (ADAMS Accession No. ML20081K602).

justice in environmental assessments and never analyze environmental justice in generic and programmatic environmental impact statements.¹⁰¹

Moreover, the Policy Statement misrepresents the scope of EO 12898. The Statement represents that the EO states, “an agency’s EJ responsibilities are to be achieved to the extent permitted by law,” when in fact the EO states “[t]o the *greatest extent practicable* and permitted by law.” The EO promotes an agency’s use of discretion to address environmental justice, but the 2004 Policy Statement represents the EO as limiting agencies to the black letter of the law. Further, the Policy Statement also presents the EO as simply “an appropriate and timely reminder to agencies to become aware of the various demographic and economic circumstances of local communities.”¹⁰² In fact, the EO mandates that “each Federal agency *shall* make achieving environmental justice *part of its mission*,” giving a mandatory directive to proactively address environmental justice.

Regardless of its major flaws, the 2004 Policy Statement has remained the NRC’s guidance on addressing environmental justice for the past decade plus.

All of this sets the stage for NRC’s current effort to address environmental justice – a challenging starting point for the agency. NRC has the statutory mandate to protect public health and safety. The agency has the direction from Congress and the President to use its discretion to address environmental justice. And the agency has the pressure from the watching public and the environmental justice communities directly affected by its decisions, from Congress, and from the larger Administration. Now is the time for the NRC to take action.

IV. Overarching Comments

We commend the NRC for taking this step and fundamentally beginning the process of assessing how the agency addresses environmental justice. But we caution that this comment process and the development of the report for the Commission must only be the beginning for the NRC. Simply checking the box on this process and then returning to the status quo is not an option that addresses the duty of the agency to the public in these matters. In order to systematically review how the agency addresses environmental justice, as the Commission directed, the NRC must recognize the history of environmental racism in the nuclear industry (*supra* at 22), understand that the agency still violates environmental justice in small and large ways, and affirm that now is the time to act on the agency’s deficiencies in addressing environmental justice.

The NRC’s mission already requires the agency to “license and regulate the Nation’s civilian use of radioactive materials *to provide reasonable assurance of adequate protection of public health and safety* and to promote the common defense and security and to protect the environment.” The NRC should take strength from the Biden Administration’s EO 14,008, which directs that “[a]gencies shall make achieving environmental justice *part of their missions* by developing programs, policies, and activities to address the disproportionately high and adverse human health, environmental, climate-related and other cumulative impacts on disadvantaged

¹⁰¹ 2004 Policy Statement, 69 Fed. Reg. 52040 (Aug. 24, 2004).

¹⁰² *Id.*

communities, as well as the accompanying economic challenges of such impacts.”¹⁰³ The NRC should update the understanding of its mission of providing protection of public health and safety to include ensuring that the most vulnerable communities are not disproportionately impacted.

We will detail all of this below, but as a first matter, we urge the NRC to update its 2004 Policy Statement. This Policy Statement was inadequate when drafted in 2003 and continues to limit how the NRC can address environmental justice today.

Second, the NRC should increase the resources it devotes to addressing environmental justice. This should include: an inward look at the agency and its practices from a diversity, equity, inclusion, and accessibility standpoint; a position with funding and authority to maintain the agency’s focus and progress on environmental justice; an outward facing community advisory board that enhances communication, transparency, and connection with communities; and the legal and technical assistance required for the public to engage in this highly technical area.

Third, the NRC should take this opportunity to update its hearing procedures located in 10 C.F.R. Part 2. The agency designed Part 2 with high bars to restrict public participation, counter to the mandate of the Atomic Energy Act (*supra* at 11-13). The NRC should finally heed the advice provided over decades and recognize its mistakes and ease the public’s burden to intervene in an NRC licensing action.

Finally, the NRC should recognize that it has the legal discretion to address environmental justice beyond the National Environmental Policy Act (NEPA).

A. The NRC Should Update its Policy Statement on Environmental Justice.

The 2004 Policy Statement is both procedurally and substantively inadequate. The NRC needs a new Policy Statement that is developed following environmental justice guidelines for engaging with communities and creates a policy that follows EO 12898’s and EO 14008’s broad calls to action.

The NRC drafted the 2004 Policy Statement without engaging with the community (*supra* at 25-27). The agency relied on existing precedent and then largely ignored public comments it received opposing the draft. In developing a new Policy Statement, the NRC should follow a process that itself embraces basic principles of environmental justice. This means creating an inclusive process from the start that recognizes and hears from affected communities and does not ignore public input.

One example the NRC can look to is the process for drafting the Environmental Justice for All Act. “Over ... two and a half years, Chair Grijalva and Representative McEachin collaborated with communities impacted by environmental racism and oppression to craft comprehensive environmental justice legislation.”¹⁰⁴ “The plan was that, from start to finish, the bill would engage the people most affected by exposure to environmental toxins, pollution, and

¹⁰³ EO 14008, 86 Fed. Reg. 7619 (2021) (emphasis added).

¹⁰⁴ Natural Resources Committee, Key Features of the Environmental Justice for All Act (Mar. 2021) <https://naturalresources.house.gov/imo/media/doc/EJ%20Fact%20Sheet%20-%20March%202021.pdf>.

contamination.”¹⁰⁵ As Climate Justice Alliance Policy Analyst Anthony Rogers-Wright explained, “[f]rontline communities were at the table from the onset. From the beginning it was a transparent process. People were speaking for themselves ... [because] [i]t’s not just the policy — it’s also the process of getting to that policy.”¹⁰⁶

We believe that if the NRC engages in such a process, that takes procedural environmental justice seriously, the NRC will be able to draft a new Policy Statement that also substantively addresses environmental justice. For example, at a minimum, the new Policy Statement should:

- Acknowledge the history of environmental racism in the nuclear fuel chain (*supra* at 22)
- Recognize the broad discretion Congress granted the NRC in the Atomic Energy Act to protect public health and safety, and further recognize that EO 12898 and EO 14008 call on the NRC to use its broad discretion to address environmental justice across its programs, policies, and activities.
- Rescind the conclusion that “EJ issues are only considered when and to the extent required by NEPA,”¹⁰⁷ and recognize that, like the EPA, the NRC has broad discretion to substantively address environmental justice across its programs, policies, and activities (*supra* at 11-13, *infra* at 35-37).
- Expand how the NRC analyzes environmental justice issues under NEPA, at a minimum following CEQ’s guidance.
- Develop effective public participation and outreach strategies (*infra* at 31-33).

To reiterate, this opportunity to comment on how the NRC addresses environmental justice should only be the starting point for the NRC to draft a new Policy Statement. As we will outline below, the NRC should create a standing environmental justice officer and community advisory board, for whom an initial action should be to work with community partners to draft a new Policy Statement.

B. The NRC Should Create Standing Environmental Justice Resources.

The NRC should devote substantial resources to addressing environmental justice across its programs, policies, and activities. The agency should commit to inward-focused review and make diversity, equity, inclusion, and accessibility a goal within the agency. The agency also should create new positions and boards to organize its inward and outward environmental justice practices. These should include at minimum an environmental justice advocate to direct the program, a community advisory board to advise the agency, and an office for technical and legal advice.

1. The NRC should increase diversity, equity, inclusion, and accessibility within the agency.

First, the NRC needs to conduct an inward focused look at the agency and its practices. As is happening in government, private, and non-profit work sectors across the country (including

¹⁰⁵Yvette Cabrera, Gist, *An Effort to Bring ‘Environmental Justice for All’ Goes Virtual* (Mar. 30, 2020) <https://grist.org/justice/an-effort-to-bring-environmental-justice-for-all-goes-virtual/>.

¹⁰⁶ *Id.*

¹⁰⁷ 2004 Policy Statement, 69 Fed. Reg. 52040 (Aug. 24, 2004).

NRDC), the NRC needs to determine that diversity, equity, inclusion, and accessibility (DEIA) are core values within the agency and then develop a plan to live up to those values. The NRC will have a hard time outwardly addressing environmental justice without first taking an inward look.

DEIA is an important element of recognitional environmental justice, which is “typically concerned with respecting identities and cultural difference; it is about the extent to which different agents, ideas and cultures are respected and valued in interpersonal encounters and in public discourse and practice.”¹⁰⁸ As the 1990 SouthWest Organizing Project letter pointed out to national environmental organizations (*supra* at 5), it is important that an organization – or an agency – working on issues that impact environmental justice communities should internally reflect those communities. Moreover, President Biden in Executive Order 14035 explained that, “it is the policy of my Administration to cultivate a workforce that draws from the full diversity of the Nation” and directed federal agencies to “be a model for diversity, equity, inclusion, and accessibility,” through hiring practices and employee trainings.¹⁰⁹ EO 14035 builds upon President Obama’s Executive Order 13583, Establishing a Coordinated Government-Wide Initiative to Promote Diversity and Inclusion in the Federal Workforce, which explained that “we are at our best when we draw on the talents of all parts of our society, and our greatest accomplishments are achieved when diverse perspectives are brought to bear to overcome our greatest challenges” and therefore made “[a] commitment to equal opportunity, diversity, and inclusion is critical for the Federal Government as an employer.”¹¹⁰

DEIA efforts are taking place across sectors and levels of government, so the NRC has a multitude of examples it can look to. Consider how the New York State Energy Research and Development Agency (NYSERDA) launched a DEI strategic plan across the organization.¹¹¹ NYSERDA developed DEI guiding principles and goals and is devoting internal capacity and resources to promote DEI within the agency.

As expressed in the public meetings and discussions the NRC held during this comment process, a primary complaint of community members who appear before the NRC is the way the agency treats them. The NRC has been accused of approaching communities in a patriarchal fashion, intent in only checking the box that they have allowed for environmental justice concerns to be raised, and then summarily dismissing the communities while the Staff gets on with the

¹⁰⁸ Adrian Martin et al., *Justice and Conservation: The Need to Incorporate Recognition*, 197 *Biological Conservation* 254 (2016) <https://www.sciencedirect.com/science/article/pii/S0006320716301045>; Candice Youngblood, *Put Your Money Where Your Mouth Is: Actualizing Environmental Justice by Amplifying Community Voices*, 46 *Ecology L. Q.* 455 (2020) https://www.ecologylawquarterly.org/wp-content/uploads/2020/04/07_46.2_Youngblood_Final_Internet.pdf (“In the context of this movement, recognitional justice requires white people, decision makers, and traditional environmental organizations to recognize their differences from communities who actually live with environmental injustices. They “must acknowledge the institutionalization of unconscious biases, exclusionary processes, and normative judgments that influence racially meaningful social structures, which in turn manifest racially disparate outcomes.”).

¹⁰⁹ Executive Order 14035, Executive Order on Diversity, Equity, Inclusion, and Accessibility in the Federal Workforce, 86 Fed. Reg. 34593 (2021).

¹¹⁰ Executive Order 13583, 76 Fed. Reg. 52847 (Aug. 23, 2011).

¹¹¹ New York State, NYSERDA, Diversity, Equity, and Inclusion at NYSERDA <https://www.nysERDA.ny.gov/About/Diversity-Equity-and-Inclusion-at-NYSERDA>.

important business of licensing a reactor or uranium recovery site. As the Three Mile Island Special Inquiry panel suggested decades ago (*supra* at 16-18), treating public participation as a hurdle to be overcome solves no problems. We urge the NRC to put communities that are affected by the agency's actions first and work with them as equal partners. The NRC would do well to advance its abilities to respect the diverse communities it works within, and approach them in a culturally appropriate manner. The NRC would do well to recognize the time and resources that communities spend meeting with the agency and honor that sacrifice. One way to build these important skills and knowledge is through DEIA training. Failure to take this approach will ensure decades more distrust and even further entrenching of the belief that NRC processes are a "sham."

These observations on the NRC's relationship with the public are grounded in the real-world experience of our years of advocacy before the NRC. Take one example – while within this comment process we have seen attempts by the agency to improve (and we applaud those efforts), NRC staff have also demonstrated consistency with this dispiriting history and how far the agency must go to meet President Biden's EO 14008 and EO 14035.

At the September 27, 2021 panel, NRC-invited panelist Leona Morgan, a Diné Navajo uranium and nuclear waste advocate, attempted to use a portion of the time given to her to speak to the NRC Staff's level of discourse. She described the use of language and its power, and that the staff should be aware of the precise language they use because language is tied to the history of what has happened. Ms. Morgan's point expressed recognitional justice. NRC Staff's response to Ms. Morgan was to prevent her from speaking.¹¹² Not only was Staff's response inappropriate and disrespectful, but it shows the fundamental lack of training and understanding within NRC Staff. We encourage the Commission and Staff to take a hard look within its culture and workforce and ask the question of whether its agency actions reflect the highest standards of excellence, safety, and a deserved public trust. We humbly and respectfully suggest that the agency has a lot of work to do internally in the DEIA space. The agency can begin to address recognitional environmental justice through its hiring and retention practices as well as by mandating DEIA trainings within the agency.

2. The NRC should create an environmental justice position within the agency.

The NRC should create a position within the agency – for lack of a better term at this point, an environmental justice advocate – with the responsibility and authority to coordinate and manage the incorporation of environmental justice into NRC's programs, policies, and activities. This position should have a meaningful budget and be structured within the agency such that its assessments and recommendations cannot simply be dismissed out of hand. Whether this person reports to the Chair, to the Commission as a whole, or to the Executive Director of Operations is a matter to be addressed in the months that follow these initial comments. Some of the responsibilities of the environmental justice position could include:

¹¹² NRC, Official Transcript of Proceedings, Public Meeting on Assessment of Environmental Justice at the NRC, at 70 (Sept. 27, 2021) (ADAMS Accession No. ML21280A350)
<https://www.nrc.gov/docs/ML2128/ML21280A350.pdf>.

- Researching and publishing the history of environmental justice in the nuclear fuel chain and at the NRC.
- Gathering and publishing data on such areas as the number of public intervenors in licensing proceedings, NRC staff's support of public intervenors, and public intervenors' success rates.
- Managing NRC's internal diversity, equity, inclusion, and accessibility trainings.
- Working with communities to update the 2004 Policy Statement, develop community advisory boards, and ensure access to legal and technical resources.

As a template for such action, the NRC can look to the Federal Energy Regulatory Commission (FERC)'s recent creation and appointment of a Senior Counsel for Environmental Justice and Equity. FERC's Senior Counsel has explained the process she plans to implement: first, conduct a baseline assessment; second, create recommendations from the outcome of the assessment; and third, implement those recommendations.¹¹³ This three-step process exemplifies how addressing environmental justice is not a box to check but an issue that requires time, considerable resources and depth of consideration, and an on-going and iterative process.

3. The NRC should create a community advisory board.

A community advisory board is a collective group of community members and organization representatives that provide community information. Such a board could be a link between the NRC and the community to build a better relationship and could provide important clarity, information, and analysis for the environmental justice advocate described above. The community advisory board could share issues and concerns with the NRC and the environmental justice advocate, as well as their unique knowledge and experience. The NRC should at least have one national community advisory board, but the agency could also host individual boards in states or regions where significant agency action – like a licensing or decommissioning – is occurring.

A community advisory board would also help the NRC with respectful and appropriate outreach. For example, some communities do not have broad band while others would prefer internet-based communication. There are different modes of discourse that are appropriate to communicate information and reach the widest audience. Moreover, many communities have traditions of respectful communication that requires specialized knowledge. A community advisory board could help the NRC reach a wider audience by ensuring the most meaningful outreach.

4. The NRC should provide legal and technical resources.

A repeated request heard from communities across the country is for the NRC to help fund intervenors and to ensure a fair process. Described *supra* at 16-18, 50 years ago the report of the Special Inquiry subsequent to the Three Mile Island accident recommended a set of public participation changes of agency procedure that we adopt again, in totem, this day.

¹¹³ FERC, Open Access: Montana Cole Discusses Environmental Justice and Equity (Sept. 15, 2021) <https://www.ferc.gov/news-events/news/open-access-montina-cole-discusses-environmental-justice-and-equity>.

The NRC should, in concert with the development of an environmental justice advocate and community advisory board (described above), create an Office of Public Counsel which would report to either the Executive Director of Operations or the Chair of the Commission. As first set forth more than 50 years ago, the primary function of the office should be to provide a source of legal and technical counsel to potential or actual intervenors and to public interest groups, whether opposed to or supportive of nuclear power in general or a specific license application in particular. The Office of Public Counsel should have the authority to intervene directly as a party in agency rulemaking or licensing proceedings, when appropriate, to ensure that all necessary safety issues are fully considered. The office should fund and monitor, where appropriate, independent technical peer review by independent outside experts. And most important, the office should fund intervenors in licensing proceedings and commenters in rulemaking proceedings who make substantive contributions that would otherwise not have been made.

There is substantial and successful precedent for just such a role at other federal agencies and in state governments as well. Just this year, FERC has created a similar office in the Office of Public Participation.¹¹⁴ Like the NRC, FERC is an agency that deals in a highly technical subject matter, which causes barriers to meaningful public participation. But the public can now contact FERC's Office of Public Participation for assistance in navigating the agency's proceedings. As an independent agency similar to the NRC, the NRC can learn from FERC.

Wisconsin also provides a similar example. The State of Wisconsin Office of the Public Intervenor (a small office in the State Department of Justice) was a state entity "created in 1967 by Republican Governor Warren P. Knowles to protect public rights in the state's natural resources and to ensure fair play and due process for matters of environmental concern."¹¹⁵ Wisconsin's Office of the Public Intervenor had access to resources and the authority to litigate. While the Office closed in 1995, the Public Intervenor has been described as providing "an invaluable advisory function to Wisconsin legislators, agency rulemakers, and citizens."¹¹⁶ The Public Intervenor litigated a select few, precedent-setting cases, giving teeth to the idea that the public's rights in natural resources would be protected. But just as important, the "public intervenors' ability to build consensus between business interests and environmental groups not only mitigated citizen opposition to proposed development projects, but ultimately resulted in the enactment of intelligently drafted rules and regulations, which enabled Wisconsin's business community to bypass costly litigation and remediation."¹¹⁷

C. The NRC Should Update its Adjudicatory Procedures in 10 C.F.R. Part 2.

In order to address environmental justice, and, specifically, the vital aspect of procedural environmental justice, the NRC must update its adjudicatory hearing and licensing procedures. As the NRC's current procedures stand, it is profoundly difficult, complicated and expensive for

¹¹⁴ FERC, Office of Public Participation (OPP) <https://www.ferc.gov/OPP>. While the Office of Public Participation is required by the Federal Power Act, for reasons outside of environmental justice, it still provides a good example of how an agency can better address environmental justice.

¹¹⁵ Jodi Habush Sinykin, *At a Loss: The State of Wisconsin After Eight Years Without the Public Intervenor's Office*, 88 Marq. L. Rev. 645 (2004) <http://scholarship.law.marquette.edu/mulr/vol88/iss3/3>.

¹¹⁶ *Id.* at 650.

¹¹⁷ *Id.*

an intervenor – even sophisticated, repeat players – have thorough and meaningful opportunities to fully adjudicate a contention in a licensing process.¹¹⁸ This is true for a host of factors (*supra* at 18-22), but cost, organization resources, available expertise, tight deadlines, and incredibly difficult pleading standards are chief reasons for the difficulties. And this is true for sizable and comparatively well-resourced NGOs such as NRDC and our colleagues at the Union of Concerned Scientists, as NRDC expressed to the Commission in 2013 and we attach here.¹¹⁹ It therefore verges on the heroic for an environmental justice community – who often lack any substantial technical, legal or financial resources and direct lines to political or social power beyond that of grassroots social activism – to succeed before the NRC. In order to meaningfully address the concerns of environmental justice and the vulnerable communities affected by the agency’s decisions, the NRC must provide these communities a fair opportunity for procedural justice.

Thus, to make progress toward the procedural justice arm of environmental justice, the NRC should reform its regulations “govern[ing] the conduct of all proceedings” in 10 C.F.R. Part 2, and specifically how these procedures interact with 10 C.F.R. Part 51 on Environmental Protection Regulations. Areas of Part 2 that will need serious attention and revision include:

- For standing, at a minimum, provide a reasonable period to amend standing documents.¹²⁰
- Amend the current “strict by design” pleading requirements in 10 C.F.R. § 2.309 and the requirement to frame contentions “with specificity.” Consider returning to the “reasonable specificity” standard.¹²¹
- Adjust the timeline for the first time intervenors file contentions to when the NRC Staff publish their final environmental impact statement and safety evaluation report.¹²²
- Address the reiterative, two-against-one approach in which the applicant and NRC Staff seem always to partner against public intervenors at the multiple opportunities to dismiss intervenors’ contentions.¹²³

¹¹⁸ We suggest that one action NRC can take to understand its baseline application of environmental justice and improve transparency is to publish data regarding intervenors, including how many proceedings do intervenors submit contentions in, how often NRC staff side with the applicant or the intervenor in contentions, how often intervenors make it to a hearing, and how often intervenors contentions are either successful in terms of rulings, the application of new or different license conditions, and additional environmental and safety review.

¹¹⁹ Christopher Paine, NRDC, *The Big Moat, How NRC Rules Suppress Meaningful Public Participation* (Jan. 31, 2013) (attached as Attachment A).

¹²⁰ See NRC, *The History of Nuclear Regulatory Commission Standing and Contention Admissibility Standards Promoting Effective and Efficient Public Participation* (2013) (ADAMS Accession No. ML13009A258).

¹²¹ *Id.*

¹²² See Harvard Negotiation & Mediation Clinical Program, *Moving Toward a Framework for Contested Hearings in the Licensing of Advanced Reactors* (June 2021) (ADAMS Accession No. ML21173A166); Letter from Diane Curran to U.S. NRC, Comments on NRC Public Participation Process (Feb. 26, 2013) (ADAMS Accession No. ML13057A975).

¹²³ See Christopher Paine, NRDC, *The Big Moat, How NRC Rules Suppress Meaningful Public Participation* (Jan. 31, 2013) (attached as Attachment A); Letter from Diane Curran to U.S. NRC, Comments on NRC Public Participation Process (Feb. 26, 2013) (ADAMS Accession No. ML13057A975).

- Adopt strict timelines for the Atomic Safety and Licensing Board and the Commission to issue decisions.¹²⁴
- Amend the standards for challenging so-called generic NEPA issues.¹²⁵

The nation's social and racial ferment over the last five years has been unmistakable and has affected every area of the country and nearly every operating industry, with the nuclear industry no exception. Now is the moment for the NRC to update its practices to ensure that all Americans, especially those most vulnerable in environmental justice communities, can meaningfully participate in NRC proceedings. Revisiting and revising its hearing and adjudicatory regulations in 10 C.F.R. Part 2 should be a first direction from the Commission as it begins to move forward with this work.

D. The NRC Should Expand its Application of Environmental Justice beyond NEPA.

When the Commission first considered environmental justice a quarter century ago, the NRC concluded and set the precedent that the “only conceivable” means for the agency to address environmental justice was through NEPA.¹²⁶ This was wrong. In making this decision to address environmental justice exclusively through NEPA, the NRC severely and unnecessarily restricted itself. The NRC has the legal authority from the Atomic Energy Act to address environmental justice throughout its programs, policies, decisionmaking, and activities rather than just under NEPA.

The NRC can rely on its implementing statute – the Atomic Energy Act – to broadly address environmental justice. As discussed, (*supra* at 11-13), the Atomic Energy Act gives the NRC “virtually unique” discretion to protect public health and safety and deny the issuance of a license that fails to protect public health and safety:

The Commission shall issue such licenses on a nonexclusive basis to persons applying therefor ... (2) who are equipped to observe and who agree to observe *such safety standards to protect health and to minimize danger to life or property as the Commission may by rule establish*; and (3) who agree to make available to the Commission such technical information and data concerning activities under such licenses as the Commission may determine necessary to promote the common defense and security and to protect the health and safety of the public.¹²⁷

In connection with applications for licenses to operate production or utilization facilities, the applicant shall state such technical specifications, including information of the amount, kind, and source of special nuclear material required, the place of the use, the specific characteristics of the facility, and such other

¹²⁴ See Harvard Negotiation & Mediation Clinical Program, *Moving Toward a Framework for Contested Hearings in the Licensing of Advanced Reactors* (June 2021) (ADAMS Accession No. ML21173A166).

¹²⁵ See Letter from Diane Curran to U.S. NRC, Comments on NRC Public Participation Process (Feb. 26, 2013) (ADAMS Accession No. ML13057A975); Eric Jantz, *Environmental Racism with Faint Green Glow*, 58 Nat. Resources J. 247 (2017) <https://digitalrepository.unm.edu/nrj/vol58/iss2/12/>.

¹²⁶ Louisiana Energy Services (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77 (1998).

¹²⁷ 42 U.S.C. 2133 (emphasis added).

information as the Commission may, by rule or regulation, deem necessary in order to enable it to find that the utilization or production of special nuclear material will be in accord with the common defense and security and *will provide adequate protection to the health and safety of the public.*¹²⁸

The NRC can therefore rely on the statutory authority in the Atomic Energy Act to fashion substantive environmental justice remedies, such as license conditions.

Moreover, the NRC has broad discretion in interpreting the provisions of the Atomic Energy Act and in securing and achieving environmental justice. Courts have repeatedly ruled that the NRC has broad discretion in interpreting the provisions of the Atomic Energy Act:

The Atomic Energy Act of 1954 is *hallmarked by the amount of discretion* granted the Commission in working to achieve the statute's ends. The Act's regulatory scheme is *virtually unique* in the degree to which broad responsibility is reposed in the administering agency, free of close prescription in its charter as to how it shall proceed in achieving the statutory objective. The agency's interpretation of what is properly within its jurisdictional scope *is entitled to great deference*, and will not be overturned if reasonably related to the language and purposes of the statute.¹²⁹

The NRC could use its broad grant of discretion to interpret the Atomic Energy Act's mandates regarding protecting public health and safety as requiring environmental justice throughout the agency's programs, policies, and activities. EO 12898 and EO 14008 direct the agency to do just that with their instructions "*to the greatest extent practicable* and permitted by law ... make achieving environmental justice part of its mission"¹³⁰ and to "make achieving environmental justice part of their missions by developing programs, policies, and activities to address the disproportionately high and adverse human health, environmental, climate-related and other cumulative impacts on disadvantaged communities."¹³¹

The EPA has already set the precedent of using broad health and safety provisions in its statutory authority to impose substantive environmental justice measures on polluting facilities.¹³² The

¹²⁸ 42 U.S.C. 2232.

¹²⁹ *Pub. Serv. Co. of New Hampshire v. NRC*, 582 F.2d 77, 82 (1st Cir. 1978) (internal citations omitted) (emphasis added) citing *Siegel v. AEC*, 400 F.2d 778, 783 (1968), *Power Reactor Co. v. Electricians*, 367 U.S. 396, 408 (1961); *Nader v. NRC*, 513 F.2d 1045, 1055-56 (1975), *Hardin v. Kentucky Utilities Co.*, 390 U.S. 1, 8 (1968); *NLRB v. Hearst Publications*, 322 U.S. 111, 131 (1944); *Bangor and Aroostock Ry. Co. v. ICC*, 574 F.2d 1096, 1104 n. 8 (1st Cir. 1978).

¹³⁰ EO 12898.

¹³¹ EO 14008.

¹³² See U.S. EPA, Plan EJ 2014 (Dec. 2011) <https://www.epa.gov/sites/default/files/2015-04/documents/planej2014legaltools.pdf>; Environmental Law Institute, *Opportunities for Advancing Environmental Justice: An Analysis of U.S. EPA Statutory Authorities* (2001) <https://www.epa.gov/sites/default/files/2015-02/documents/eli-opportunities4ej.pdf>; Memorandum from EPA Office of General Counsel to Office of Enforcement and Compliance Assistance, Office of Air and Radiation, Office of Solid Waste and Emergency Response, and Office of Water, EPA Statutory and Regulatory Authorities Under Which Environmental Justice Issues May Be Addressed in Permitting (Dec. 1, 2000)

language in RCRA, the Safe Water Drinking Act, Clear Air Act, and similar statutes implemented by the EPA parallel the Atomic Energy Act's health and safety provisions. Relying on the EPA precedent and the broad public health and safety language within the Atomic Energy Act, the Commission can conclude that, "If a proposed licensing activity was found to adversely affect the health or safety of an environmental justice population, the NRC would be required, under the AEA, to either impose license conditions that eliminated the adverse health and safety consequences or deny the license application."¹³³

Using existing authority under the Atomic Energy Act to create substantive environmental justice remedies would impose no new duties on the NRC or create new rights or causes of action. The NRC is already required to protect health and safety under the Atomic Energy Act. The NRC would simply be using its existing authority and statutory mandate to determine if there are special factors that would change the health and safety impacts of a project on a specific population.

V. Response to Questions

NRC Writes:

As directed, the staff will ... evaluate whether the NRC should incorporate environmental justice beyond implementation through NEPA.

Response:

The NRC should incorporate environmental justice beyond implementation through NEPA. The Atomic Energy Act gives the NRC "virtually unique" discretion to protect public health and safety and deny the issuance of a license that fails to protect public health and safety. EO 12898 and EO 14008 *encourage* the NRC to use its discretion to address environmental justice "to the greatest extent practicable and permitted by law." The EPA also has demonstrated how an agency can use broad health and safety provisions in its authorizing statute (like those in the Atomic Energy Act) to impose substantive environmental justice measures.

Using existing authority under the Atomic Energy Act to create substantive environmental justice remedies would impose no new duties on the NRC or create new rights or causes of action. The NRC is already required to protect health and safety under the Atomic Energy Act. The NRC would simply be using its existing authority and statutory mandate to determine if there are special factors that would change the health and safety impacts of a project on a specific population. (*supra* at 11-13, 35-37).

[02/documents/ej_permitting_authorities_memo_120100.pdf](#); Richard Lazarus & Stephanie Tai, *Integrating Environmental Justice Into EPA Permitting Authority*, 18 Ecology L.Q. 617 (1999)

<https://repository.law.wisc.edu/s/uwlaw/media/23239>.

¹³³ Eric Jantz, *Environmental Racism with Faint Green Glow*, 58 Nat. Resources J. 247 (2017)

<https://digitalrepository.unm.edu/nrj/vol58/iss2/12/>.

NRC Writes:

The staff will also review the adequacy of the 2004 Policy Statement.

Response:

The 2004 Policy Statement was inadequate when drafted in 2003 and continues to limit how the NRC can address environmental justice today. The NRC should start a public process to update it. (*supra* at 25-29).

NRC Writes:

The Commission further directed the staff to consider whether establishing formal mechanisms to gather external stakeholder input would benefit any future environmental justice efforts. ... The NRC is interested in obtaining a broad range of perspectives from stakeholders and interested persons.

Response:

We agree; the NRC should establish formal mechanisms to gather external stakeholder input. But the NRC must do more. To address environmental justice, the NRC cannot simply inform communities about decision making and ask for the occasional, later disregarded, community comments. Rather, the NRC must create deep, inclusive, and on-going engagement in order to build trust with communities that historically have been excluded and disproportionately negatively impacted.

We suggest the NRC create community advisory boards to build trust and on-going relationships with the community. (*supra* at 32).

NRC says:

To carry out the Commission's direction, the staff is seeking to engage stakeholders and interested persons representing a broad range of perspectives.

Response:

We appreciate the stated goal of engaging stakeholders and persons representing a broad range of perspectives. We hope that this comment period has been a much-needed wake up call to the NRC on just how much work the agency has to do in this area. The NRC Staff had to be needled to create a comment period long enough to realistically allow meaningful community input; communities were given only a few days' notice before the first public meetings held; and the September 27 Round Table only included representation from environmental justice communities after the originally invited speakers complained about the lack of representation. (*supra* at 30-31).

All of that being said, the NRC Staff have appeared to take this process to heart as a learning experience. We appreciate the deadline extensions and the expansions of the NRC-hosted panels. We also appreciate that the NRC has a web page devoted to the process and continually update it with new information. We hope to see such growth at the NRC beyond this process.

NRC asks:

(1) What is your understanding of what is meant by environmental justice at the NRC?

Response:

According to the Commission, “[t]he term ‘environmental justice’ refers to the federal policy established in 1994 by Executive Order 12898, which directed federal agencies to identify and address ‘disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations.’”¹³⁴ But this is a self-created and self-imposed understanding of environmental justice at the NRC.

As has been shown (*supra* at 3-6), environmental justice is a broader term, and the NRC can incorporate it widely throughout its programs, policies, and activities.

NRC states:

(2) As described in the Commission’s 2004 Policy Statement on the Treatment of Environmental Justice Matters in NRC Regulatory and Licensing Actions (69 FR 52040), the NRC currently addresses environmental justice in its NEPA reviews to determine if a proposed agency action will have disproportionately high and adverse impacts on minority and low-income communities, defined as environmental justice communities.

Response:

The 2004 Policy Statement sets forth a policy for NRC to limit, as opposed to meaningful address, environmental justice considerations (*supra* at 25-29). The NRC has broad statutory authority to address environmental justice beyond its NEPA reviews (*supra* at 11-13, 35-37).

NRC asks:

(2)(a)(i) When the NRC is conducting licensing and other regulatory reviews, the agency uses a variety of ways to gather information from stakeholders and interested persons on environmental impacts of the proposed agency action, such as in-person and virtual meetings, Federal Register notices requesting input, and dialog with community organizations. How could the NRC expand how it engages and gathers input?

Response:

We provided a detailed response to just this question in the comments above, but we reiterate briefly that the NRC should create on-going relationships with communities through community advisory boards (*supra* at 32) and update its adjudicatory procedures in 10 C.F.R. Part 2 (*supra* at 33-35).

¹³⁴ 86 Fed. Reg. at 36308 (citing Entergy Nuclear Operations, Inc. (Indian Point Nuclear Generating Units 2 and 3), CLI-15-6, 81 NRC 340, 369 (2015)).

NRC asks:

(2)(a)(ii) What formal tools might there be to enhance information gathering from stakeholders and interested persons in NRC's programs, policies, and activities?

Response:

The NRC should devote substantial resources to addressing environmental justice across its programs, policies, and activities. The agency should commit to inward-focused review and make diversity, equity, inclusion, and accessibility a goal within the agency (*supra* at 29-31). The agency also should create new positions and boards to organize its inward and outward environmental justice practices. These should include at minimum an environmental justice advocate to direct the program, a community advisory board to advise the agency, and an office of Public Counsel for technical and legal advice (*supra* 31-33).

NRC asks:

(2)(a)(iii) Can you describe any challenges that may affect your ability to engage with the NRC on environmental justice issues?

Response:

The NRC's procedures suppress public participation (*supra* at 18-22). It is profoundly difficult, time-consuming, complicated, and expensive for an intervenor to engage. The processes are especially difficult for those unfamiliar with the agency and those with limited resources. Environmental justice communities may not have access to the experts, time, and resources to engage.

NRC asks:

(2)(b) How could the NRC enhance opportunities for members of environmental justice communities to participate in licensing and regulatory activities, including the identification of impacts and other environmental justice concerns?

Response:

The NRC has many options for enhancing opportunities for members of environmental justice communities to participate. Specifically, the NRC should create an environmental justice advocate (*supra* at 31-32), community advisory boards (*supra* at 32), and Office of Public Counsel (*supra* at 32-33), as well as update its adjudicatory procedures (*supra* at 33-35).

NRC asks:

(2)(c) What ways could the NRC enhance identification of environmental justice communities?

Response:

The NRC should create an environmental justice advocate (*supra* at 31-32), community advisory boards (*supra* at 32), and Office of Public Counsel (*supra* at 32-33).

NRC asks:

(2)(d) What has the NRC historically done well, or currently does well that we could do more of or expand with respect to environmental justice in our programs, policies, and activities, including engagement efforts? In your view, what portions of the 2004 Policy Statement are effective?

Response:

In the years that NRDC has practiced before the NRC on a myriad of environmental and safety matters, we have witnessed NRC staff or Atomic Safety & Licensing Board Judges (and even some Commissioners) attempt to make serious, searching inquiry that both protected public health and valued the affected community in a respectful, powerful fashion. But we have also witnessed the opposite of such attempts all too frequently, even if not ill-intentioned. Now is the time to commence both the internal and external work to deeply engage with communities, states, tribal governments, industry, labor and health organizations and attempt to bring the agency forward in a way that meets the goals of EO 14008.

NRC asks:

(3) What actions could the NRC take to enhance consideration of environmental justice in the NRC's programs, policies and activities and agency decision-making, considering the agency's mission and statutory authority?

Response:

As discussed, (*supra* at 11-13, 35-37), the NRC has broad authority to consider environmental justice beyond its application in NEPA, and a strong mandate from the Administration to move forward in substantive fashion on this important and core concern of federal policy.

NRC asks:

(3)(a) Would you recommend that NRC consider any particular organization's environmental justice program(s) in its assessment?

Response:

We appreciate the question and provided some examples above related to progress on these matters in federal agencies (FERC) and state (NYSERDA) (*supra* at 30, 32-33). This is precisely the kind of searching inquiry that should be deeply evaluated by the agency as it updates its 2004 Policy Statement and commences the process of creating an environmental justice advocate and Office of Public Counsel.

NRC asks:

(3)(b) Looking to other Federal, State, and Tribal agencies' environmental justice programs, what actions could the NRC take to enhance consideration of environmental justice in the NRC's programs, policies, and activities?

Response:

At a minimum, the NRC should look to the following for considering environmental justice programs:

- the U.S. Environmental Protection Agency and National Environmental Justice Advisory Council (NEJAC);
- the Federal Energy Regulatory Commission’s Senior Counsel for Environmental Justice and Equity and Office of Public Participation;
- White House Environmental Justice Advisory Council (WHEJAC);
- Environmental Justice Interagency Council (IAC); and
- New York State Energy Research and Development Agency (NYSERDA).

NRC asks:

(3)(c) Considering recent Executive Orders on environmental justice, what actions could the NRC take to enhance consideration of environmental justice in the NRC’s programs, policies, and activities?

Response:

The staff should look to many recent Executive Orders, including:

- 12898, Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations (Feb. 16, 1994)
- 13175, Consultation and Coordination with Indian Tribal Governments (Nov. 9, 2000)
- 13985, Advancing Racial Equity and Support for Underserved Communities Through the Federal Government (Jan. 25, 2021)
- 13990, Protecting Public Health and the Environment and Restoring Science To Tackle the Climate Crisis (Jan. 25, 2021)
- 14008, Tackling the Climate Crisis at Home and Abroad (Feb. 1, 2021)
- 14015, Establishment of the White House Office of Faith-Based and Neighborhood Partnerships (Feb. 14, 2021)
- 14030, Climate-Related Financial Risk (May 20, 2021)
- 14035, Diversity, Equity Inclusion, and Accessibility in the Federal Workforce (June 25, 2021)

NRC asks:

(3)(d) Are there opportunities to expand consideration of environmental justice in NRC programs, policies, and activities, considering the agency’s mission? If so, what are they?

Response:

The NRC has broad authority to consider environmental justice in its programs, policies, and activities (*supra* at 11-13, 35-37). The Atomic Energy Act gives the NRC “virtually unique” discretion to protect public health and safety and deny the issuance of a license that fails to protect public health and safety. Using existing authority under the Atomic Energy Act to create substantive environmental justice remedies would impose no new duties on the NRC or create new rights or causes of action. The NRC is already required

to protect health and safety under the Atomic Energy Act. The NRC would simply be using its existing authority and statutory mandate to determine if there are special factors that would change the health and safety impacts of a project on a specific population.

VI. Conclusion

We thank you for the opportunity to provide these comments and can be reached at the contact information below.

Sincerely,

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Attachment A

THE BIG MOAT

How NRC Rules Suppress Meaningful Public Participation In NRC Regulatory Decision-making

Prepared Statement of
Christopher Paine¹
Nuclear Program Director
Natural Resources Defense Council

Before the

Nuclear Regulatory Commission
Rockville, Maryland
January 31, 2013

Chairman McFarlane, members of the Commission, thank you for this opportunity to present the views of the Natural Resources Defense Council regarding the Commission's standing and contention admissibility requirements. In doing so, I will not limit my remarks to these requirements alone, but rather comment on their role within the wider web of restrictive NRC rules that reduce meaningful public participation in the Commission's efforts to ensure nuclear safety, and thereby, I believe, hinder those efforts.

In all candor, my first instinct was to turn down your invitation to appear today, as I found it difficult to summon the conviction that anything I, or any other public interest representative says today will have a beneficial impact. But NRDC has a long history of constructive engagement, even as the Commission in recent decades has come to resemble a medieval fortress, surrounded by a wide and deep moat of rules to keep unruly citizens at bay.

Other meetings like the present one have been held over the years, accompanied by rhetoric about the importance of "public participation" to the Commission's work, but in that period the rules governing public participation have only become *more* exclusionary, the last major revision being in 2004, when the Commission curtailed the use of trial-type procedures in adjudicatory public hearings.

I think we may have divergent views about what the phrase "public participation" means. Judging by their public statements and actions over the last quarter century, the dominant view among Commissioners and Staff seems to be that "public participation" is either a legal necessity foisted on the agency by the vestiges of the original Atomic Energy Act of 1954, or a useful component of an overall public communications strategy geared to reassuring the public that nuclear power plants—even aging obsolescent ones—are safe. In this view, public participation in informational and "limited-appearance" type meetings, where NRC representatives listen and occasionally respond to citizen safety and environmental concerns, is intended to give the public

¹ For further information, contact: cpaine@nrdc.org

a reassuring glimpse into the regulatory process ongoing in the background, in which the NRC's vigilance and expertise will continue to keep nuclear power plants safe.

Since the plant license holder or applicant usually mobilizes its own employees and boosters in the community to attend such meetings, the NRC can almost always count on a polarized audience voicing generalized and sometimes not terribly well-informed sentiments, pro and con, about nuclear energy. Little if any informed discussion of specific nuclear safety or environmental issues occurs in such meetings. Nor do I believe that NRC Staff leave such meetings with a heightened respect for the contribution of the public to the licensing process.

Unlike many other federal agencies with statutory mandates that include the public—via citizen suit provisions—as a *partner* in achieving compliance with the statute, the Commission's statutory authority does not assign a direct role to the public in enforcing its regulatory requirements, which by law must ensure adequate protection of the public health and safety against radiation hazards from the licensed civilian uses of nuclear energy. Instead, the role envisioned under the AEA is for members of the public, including representatives of state, local, and tribal governments, to bring their concerns regarding compliance with the NRC's statutory mandate and regulatory requirements *into the Commission's licensing and rulemaking processes, where these concerns can be fairly adjudicated*. Unfortunately, as demonstrated by the Staff's near perfect alignment with industry in opposing citizen petitions to intervene in licensing proceedings, the Commission today seems to have strayed quite far from the intent of this statutory framework, which was designed to allow contending views of nuclear hazards and risks to be fully explored and adjudicated in a quasi-judicial proceeding.

I. Current NRC Rules are Hostile to Public Participation in Licensing Proceedings

In setting forth the basis for our view that there is a pervasive bias in NRC rules against public intervenors, I begin with the hearing request process itself. Following the Notice of Opportunity for hearing in the *Federal Register*, a prospective petitioner who believes [s]he may have an affected interest in the proceeding has only *60 days* in which to: (1) study the voluminous license application and draft environmental report; (2) investigate any safety and/or environmental concerns they have identified in the report; (3) document his/her standing to pursue these concerns; (4) draft admissible safety and/or environmental contentions; (4) seek out technical declarations from experts to support these contentions, (5) hire expert legal counsel to frame “with specificity” the contentions and their legal bases in ways that satisfy all the “strict-by-design” pleading requirements of 2.309 (f). All this, within 60 days. It's little wonder that few prospective public intervenors are able to surmount these initial obstacles, and most don't even try.

Meanwhile, long before the hearing notice, the Staff will have been engaged with the Applicant in a multi-month to multi-year iterative coaching process with respect to the forthcoming application, including numerous exchanges of proprietary documents not available to the Petitioner. But despite its superior access to information and expertise regarding the application, the Staff is excused from taking a position on the application until it issues its final environmental report and final safety evaluation, which often occurs *a year or more after* the first notice of opportunity for hearing is filed.

So the Petitioner—the prospective party to the proceeding with the least information about the docketed application—is required to demonstrate *in advance*, with “*particularity*,” and *prior to discovery or mandatory disclosures of any kind*, that it has a case of sufficiently substantive merit that it should be allowed to proceed to a hearing. This is a high burden and one that has been contentiously wrangled over in numerous ASLB and Commission decisions. Meanwhile the Staff, which is far better informed about the application, is allowed to withhold *significant elements of its analysis* regarding the application.

While it’s true that once a contention is accepted, the Staff is under obligations to produce documents pursuant to both 10 C.F.R. § 2.336(b) and § 2.1203, such a situation emerges only after Staff has joined industry in opposing admission of the contention in the first instance. And while some of what transpires between applicant and staff prior to the admission of a contention is potentially available, albeit through unreliable searches on ADAMS, the significant burdens of tracking items of interest in a sea of paper rests entirely on the public (and for the long stretch of time when it’s not apparent whether the application will even be filed). And reiterating the point above, the Staff generally joins the Applicant in opposing the petitioners’ proposed contentions for failing to satisfy each of the requirements (i)-vi in §2.309 (f). Further, even when the Staff agrees with the Applicant’s position in all significant respects, Staff is entitled to file its own briefs and motions aimed at excluding the petitioner, to which the petitioner must respond, so it is two-against-one from the very outset.

With the Staff and applicant both working to demonstrate the petitioners’ inability to satisfy the “strict-by-design” contention admissibility requirements of 10 C.F.R. § 2.309(f), the rules of the game as described above place heavy burdens and expense on any citizen petitioner, but especially on those without financial resources and specialized legal representation. Other inequities exist as well. On the one hand, the content of a petitioner’s initial pleading is essentially frozen based on the limited information available to it within the 60-day window (following a hearing opportunity notice), a window that is realistically somewhat shorter given the need to “fly-speck” the petition into final form so that it is not tripped-up by technicalities. On the other hand, it is common that the docketed application continues to evolve, as the applicant responds to Requests for Additional Information (RAIs) from the Staff, and/or the Applicant amends the application to fill gaps in the version that was initially accepted for docketing.

There are no restrictions on when, or how many times, an applicant may file a license amendment, or when the Staff must complete its safety and environmental reviews, or the number of supplements it may file to its environmental analysis. But under the current rules, any admitted or prospective intervenor desiring to take issue with a late-filed license amendment, or additional information supplied by the Applicant, bears the asymmetrical burden of having to file a motion with the Board, typically within ten days of the “triggering event,” justifying each such “late-filed” contention by addressing eight separate factors that the Board must “balance” in determining whether or not it should be admitted.

Assume for a moment that a petitioner surmounts all these hurdles and convinces a licensing board to grant standing and at least one admissible contention – a fairly rare event, statistically

speaking. What happens then? Under current rules, the Applicant is entitled to an immediate interlocutory appeal of the board's ruling to the Commission on the question of whether the petition should have been wholly denied (but the intervenor has no right to appeal unless the entire petition was denied, essentially leaving rejected contentions for review only after the entire hearing process has been completed), and here again the Staff is allowed to weigh-in as though it were a separate party, but invariably, aligning itself with the applicant.

This second round of double-teaming means more briefing and more legal expenses for petitioners who, should they finally prevail on these preliminary matters, still find themselves just at the starting line of a proceeding on the substantive merits of their contention(s), but having already spent many tens of thousands of dollars. All this unproductive procedural wrangling consumes many months or even years, taxing the resources of all parties involved, but especially citizen intervenors, while taxpayers (via applicants' tax-deductible litigation expenses), electricity users, including intervenors (via electricity rates) and mandatory fees from license holders finance a veritable beehive of legal talent to represent nuclear licensees and the Staff.

While it should be obvious that NRDC believes a major reform of NRC rules affecting intervenors is called for, this does not seem a likely prospect. But as a matter of elemental fairness, I commend to you this immediate and simple reform: in matters where the Staff agrees with any other party, including the Applicant, the Staff be compelled to file joint motions and briefs, thus reducing the inequitable burden on the petitioner to respond to multiple slight variations in the same basic arguments for excluding petitioners from the licensing process. This rule already applies to all intervenors, regardless of whether they are private citizens, sovereign states, local governments or Indian Tribes by requiring that they be consolidated for all purposes on any issue on which they take the same position.

II. The Commission's NEPA Regulations Deprive States, Local Jurisdictions, Indian Tribes and Ordinary Citizens of the Due Process Rights Guaranteed Them Under NEPA and the APA

Now I would like to draw your attention to a violation of due process buried within the current rules. It involves the Commission's treatment of the NEPA. In the case of almost every other agency I can think of, draft and final environmental impact statements must be produced on a timetable that allows the environmental considerations explored therein to be commented upon by the public and considered on a schedule that meaningfully informs agency decision-making with respect to the proposed action. CEQ rules prohibit the *ex post facto* use of environmental impact statements to justify decisions already taken.

As you know, this requires the agency to determine—early in the agency's decision process and with public input—the appropriate scope of its required environmental analysis, after which it prepares a draft statement for public comment outlining various reasonable alternatives for implementing its proposed action that would either prevent, reduce, or mitigate harmful environmental impacts, and identifying the agency's preferred alternative, if it has one. Then typically at least 30 days prior to any formal "Record of Decision" to move forward with implementing the proposed action, the Agency must issue a final environmental impact

statement that responds to the public comments received, and identifies any changes to the draft analysis or preferred alternative.

In contrast to this typical federal agency procedure—which guarantees, to those who can show they might be harmed by an agency action predicated on a flawed NEPA analysis, the right to challenge it in federal district court—the Commission’s rules *routinely deny this right* to any state or local jurisdiction, membership organization, or private citizen who has not *previously gained party status at the outset of the licensing proceeding* with at least one admissible contention based on a “genuine dispute” with the *applicant’s environmental report* on a “material issue of law or fact.” The obvious logical and legal difficulty here is that the applicant is not bound by NEPA, and thus all arguments regarding the admissibility of the contention must be framed *as though* the Licensee’s environmental report were *the future draft* of an EIS prepared by NRC Staff.

Aside from broadcasting the rather unflattering impression that *licensees* rather than NRC staff are actually the ones preparing the regulator’s own “hard look” at the environmental consequences of its licensing actions, this onerous requirement compels already overcommitted and underfinanced state and local officials, and others who are primarily concerned about local and regional environmental impacts, to commit significant legal resources to gain entry into the licensing process at the outset—in some case years earlier than necessary—if they want to protect their future appeal rights under NEPA. Comments on the EIS from non-parties to the proceeding, who are boxed out of pursuing their environmental concerns in the Court of Appeals, are particularly susceptible to being ignored by the Commission

While State and local officials and tribes, within whose jurisdictions the license applicant’s facility is located, are granted standing by rule, this does not help them that much, as they and all other persons with environmental concerns must still surmount all the previously enumerated procedural hurdles to achieving an admissible contention, even if they have less interest or expertise or resources to expend in the nuclear safety aspects of the proceeding. But once again, this is only the beginning of their burden.

When an actual draft or final EIS is eventually produced by NRC Staff, parties to the proceeding may file new or amended contentions regarding this new document only to the extent that there are “data and conclusions in the NRC draft or final [EIS], environmental assessment, or any supplements relating thereto, that differ significantly from the data or conclusions in the applicant’s documents.” This requirement would appear to put a potentially *error-inducing* premium on the Staff’s EIS to demonstrate *consistency* with an Applicant’s flawed environmental report, thereby insulating the EIS from further challenges. In other words, flaws not previously identified by intervenors in the ER *may actually be preserved and replicated* in the EIS, with the official endorsement of the NRC’s own rules.

If they fail to satisfy this (dysfunctional) criterion, public intervenors may file new or amended contentions “only with leave of the presiding officer,” upon a showing that the contention is based on information that was not “previously available,” is “materially different than information previously available,” and has been submitted “in a timely fashion based on the

availability of the subsequent information.”² We fail to see the beneficial purpose to be served by such nit-picking exclusionary rules. Why does the Commission require exclusionary rules that sweep issues off the table before your ASLB panels can adjudicate them? Indeed, such rules artificially constrain adjudication of the merits of environmental issues surrounding the start-up or extended operation of nuclear power plants and other production and utilization facilities. A proliferation of procedural rules designed to bat away issues before they can be considered on their merits lends credence to the supposition that the Commission is afraid to let ASLB judges do the work that Congress envisioned for them.

III. Current NRC Rules Infringe Upon the Letter and Clear Legislative Intent of the Atomic Energy Act (AEA)

Twenty-four years have passed since the Commission adopted rules curtailing the public’s access to the reactor licensing process. A number of public interest organizations objected to these rule changes and challenged them at the time, leading to a unanimous Court of Appeals ruling in 1989 that the Part 52 rules contravened the plain language of Sections 185 and 189 of the Atomic Energy Act (AEA), by illegally depriving the affected public of the right to be heard on significant new safety issues before newly-constructed power plants are permitted to operate.

This unanimous panel decision was later reversed by a split 6 – 4 vote of the full Court of Appeals in 1991, with five of the six majority votes coming from Reagan-Bush appointees to the Court. The majority found that because the AEA “provides no unambiguous instruction as to how the ‘hearing’ is to be held,” the Commission therefore has broad discretion to determine what issues should be heard at each stage of the licensing process, and can rely on prior administrative determinations that a plant is safe as the basis for eliminating public hearing rights. In the majority’s view, this discretion to deny a public hearing extends even to consideration of significant new safety issues that the Commission itself determines could not have been raised in prior proceedings. Such consideration can be ensured, the majority reasoned, because “Part 52 employs § 2.206 not as a means for requesting enforcement,” [where the court agreed petitions “do fall within the unreviewability presumption of *Heckler v. Chaney*”] “but as an integral part of the licensing process itself.” Thus, “we think that Commission action on § 2.206 petitions authorized by Part 52 is judicially reviewable.”³ Because we have not yet reached the post-construction phase for a reactor with a COL license, this unusual feature of the court’s ruling has yet to be tested.

Fortunately for the public, the *en banc* majority did not rule on the validity of a Staff-proposed interpretation of Sec. 189—that the affected public receives a “hearing” within the meaning of Sec. 189 whenever a 2.206 petitioner sends a letter to the Commission and receives a response back!

² 10 C.F.R. § 2.309 (f) (2), (i) – (iii).

³ *Nuclear Information and Resource Service v. NRC*, 969 F.2d 1178-80 (D.C. Cir. 1992) (*en banc*), cited in E. R. Glitzenstein, “The Role of the Public in the Licensing of Nuclear Power Plants,” in *Controlling the Atom in the 21st Century*, D.P. O’Very, C. E. Paine, and D.W. Reicher, eds. Westview Press, 1994, at 173-174.

NRDC's view is that both the letter and legislative history of the AEA of 1954 establish that, in partial compensation for the exclusive authority granted the federal government to regulate the radiation hazards from licensed civilian nuclear power generation, Congress intended Sec. 189 (a) (1) (a) to confer upon states, municipalities, and indeed "any person whose interest may be affected by" the Commission's licensing and rulemaking proceedings, an opportunity upon request to be admitted as parties to those proceedings in order to adjudicate their concerns.

"In *any* proceeding under this chapter, for the granting, suspending, revoking or amending of any license or construction permit, or application to transfer control, and in *any* proceeding for the issuance or modification of rules and regulations dealing with the activities of licensees...the Commission *shall* grant a hearing upon the request of any person whose interest may be affected by the proceeding, and *shall* admit any such person as a party to such proceeding."⁴

The italicized portions of the excerpt clearly indicate that Congress intended this public hearing opportunity to be a *non-discretionary duty* of the Commission. The provision does not say the Commission "may" grant hearing requests from persons whose interests may be affected by its licensing and rulemaking proceedings. And it does not say the Commission "may" admit them as parties to licensing proceedings. In both instances it says the Commission "shall" do so.

Moreover, if Congress had intended to give the Commission unlimited discretion to pile up exclusionary rules transforming the plain language meaning of the word "request" into "a request meeting any and all tests that the Commission chooses to apply," *thereby effectively denying persons with affected interests access to licensing proceedings*, why would Congress have specifically authorized [Sec. 192] the creation of "one or more atomic safety and licensing boards" to assist the Commission in conducting these very proceedings?

Can any Commissioner today honestly opine that in authorizing creation of the ASLB structure, the intent of Congress was to have the boards spend a large part of their time adjudicating, not the merits of substantive nuclear safety issues, but rather the public's inability to surmount an ever expanding series of procedural obstacles to gaining a hearing? Such an interpretation of the Commission's statutory mandate makes no historical or political sense, and is contrary to the plain language of the statute.

Congress further directed that on each panel, one member "shall be qualified in the conduct of administrative proceedings," and the other two "shall have technical or other qualifications as the Commission deems appropriate to the issues to be decided." Clearly, Congress intended these boards to be conducting the important work of adjudicating substantive contested safety issues brought to the Commission's attention via the public hearing process created under Sec. 189. Instead, boards today are compelled to spend much of their time determining what part, if any, of a prospective party's petition will fit through the eyes of multiple procedural needles.

⁴ 42 U.S.C. 2239

IV. The Myth of the Vampire Intervenor

The arguments above notwithstanding, we are obviously cognizant of the fact that, responding to the economic, managerial and regulatory failures of the first nuclear build-out in the 1980's, Congressional nuclear power proponents in the early 1990's adopted the mistaken view that the root cause of these failures was protracted delay in plant licensing caused by public intervention in the hearing process. As documented in your own General Counsel's background memo prepared for this meeting, members and staff of the Commission at the time did much to promote this fashionable, but factually and historically incorrect view.

Specifically, the memo fails to cite a single documented historical instance in which the number of public hearing days occasioned by public intervention in a license proceeding significantly delayed the granting of a license. Instead, tagging public intervenors as the root cause of delay is stipulated as an onerous reality to which the Commission was forced to respond, as though it were irrefutable truth. We suggest today that it's high time to dispense with the myth of the vampire intervenor.

While I am certain an examination of the historical record can turn up examples of frivolous or ill-informed contentions, I think everyone in this room is aware that the vast preponderance of delays encountered in the last nuclear build-out were the result of: (1) real and significant problems with the design and construction of the units; (2) the filing of incomplete applications, thereby triggering numerous revisions, amended contentions, and long delays while the applicants supplied information responsive to the Staff's queries and filled intervenor-identified gaps in the license applications; (3) chaotic record-keeping of inspection and test results essential to a determination that the plant would be safe to operate; (4) the need to incorporate post-TMI safety upgrades; (5) the Commission's insistence on postponing resolution of emergency planning issues to the operating license phase (6) managerial incompetence on a grand scale by TVA and other utility organizations with no prior experience with nuclear power. One could go on and list even more reasons, *none of which have to do with the basic mechanics and scheduling of public participation in the licensing process.*

Far from obstructing Commission efforts to ensure nuclear safety, public intervenors have made, and—if allowed renewed meaningful opportunities to participate—would continue to make significant contributions to nuclear safety. A number of ASLB judges have gone on record over the years in support of this exact point.⁵

⁵ A former chief of the Atomic Safety and Licensing Board, B. Paul Cotter, Jr., outlined the value of public participation in 1981: "(1) Staff and applicant reports subject to public examination are performed with greater care; (2) preparation for public examination of issues frequently creates a new perspective and causes the parties to reexamine or rethink some or all of the questions presented; (3) the quality of staff judgments is improved by a hearing process which requires experts to state their views in writing and then permits oral examination in detail...and (4) Staff work benefits from [prior] hearings and Board decisions on the almost limitless number of technical judgments that must be made in any given licensing application." "Memorandum to Commissioner Ahearne on the NRC Hearing Process," May 1, 1981, at 8. as quoted in E. R. Glitzenstein, "The Role of the Public in the Licensing of Nuclear Power Plants," in

V. Legislating the Part 52 Rules – A Self-Inflicted Wound for Nuclear Safety

While the vampire intervenor is a myth, proponents in the Senate in the early 1990's correctly perceived that absent new statutory authority, a future Court of Appeals might find the *combined effect* of then recent Commission rule changes – the tightened Part 2 rules on contention admissibility (August 1989) and Part 52 rules limiting public opportunities to contest construction and operation of new power plants (April 1989) – to be in violation of Sec. 189 (a). So they used the Energy Policy Act of 1992 to amend Sec. 189 to conform it to Part 52's curtailment of the public's right to a post-construction hearing, with respect to "all proceedings involving a combined license for which an application was filed after May 8, 1991."⁶

There is no doubt that the 1992 *Energy Policy Act* modifications to the AEA altered the public's ability to get an adjudicatory hearing on contested issues when the matter involves the suitability for operation of new reactors constructed pursuant to a COL license.⁷ The bar to adjudication of *nuclear safety issues* in this context is now so high that the rules actually jeopardize adequate protection of the public health and safety.

Once again, *within only 60 days* from the publication of a notice of intended operation in the Federal Register, a person seeking a hearing must not only meet all the Commission's usual "strict by design" contention admissibility requirements, but must also, *before discovery of any kind*, "show, *prima facie*, that one or more of the acceptance criteria in the combined license have not been, or will not be met, and the specific operational consequences of nonconformance that would be contrary to providing reasonable assurance of adequate protection of the public health and safety."

Even if the unlikely event a petitioner is able to surmount these demanding hurdles, the amended statute says the Commission is free nonetheless to "either deny or grant the request" for a hearing—a decisive departure from the original hearing mandate under Section 189 (a)—and the statute itself contains no additional criteria on which to base a claim that the Commission has abused its discretion in rejecting such a request.

Controlling the Atom in the 21st Century, D.P. O'Very, C. E. Paine, and D.W. Reicher, eds. Westview Press, 1994, at 161. In 2008, Judge Michael Farrar, an NRC Judge for over thirty years, reaffirmed the valuable contribution public participation can make to the licensing process: "The Petitioners were instrumental in focusing the Board's attention on the troubling matters discussed above. That they did so is a testament to the contribution that they, and others like them, can make to a proceeding. Moreover, in doing so they often labor under a number of disadvantages." In the Matter of Shaw Areva Mox Services (Mixed Oxide Fuel Fabrication Facility), LB-08-11, Docket No. 70-3098-MLA, at 49 (June 27, 2008) (Farrar, J., concurring).

⁶ 42 U.S.C. 2235.

⁷ Public hearing opportunities for all other licensing proceedings remain governed by the provisions of Section 189 (a) (1) A, which opportunities the Commission seems determined to erode by prejudicial employment of its rulemaking powers.

The Part 2 contention admissibility rules continue where the statute leaves off, further specifying that any request for a post-construction COL hearing “must include the specific portion of the report [from the licensee to the Commission] required by 10 CFR § 52.99 (c) which the requestor believes is inaccurate, incorrect, and/or incomplete. If the requestor identifies a specific portion of the § 52.99 (c) report as incomplete, and the requestor contends that the incomplete portion prevents the requestor from making the necessary *prima facie* showing, then the requestor must explain why this deficiency prevents the requestor from making the *prima facie* showing.”⁸

There are a number of obvious Catch 22’s with this particular requirement. The content of the §52.99c report is not specified by statute, and is only vaguely described in the rule, so it is difficult to imagine how a requestor could objectively demonstrate that any “specific portion” of the report is “incomplete,” other than to claim that certain ITAAC results are entirely missing from the “report.” In fact, § 52.99 (c) actually refers to this “report” merely as a “notification” that “must contain sufficient information to demonstrate that the prescribed inspections, tests, and analyses have been performed and the prescribed acceptance criteria have been met.”

While this “notification” is supposed to be provided no later than 225 days before the scheduled date for initial fuel loading, it might easily be comprised of just a table or checklist showing when the required “inspections, test, and analyses” were conducted, and a brief comparison of the quantitative or qualitative results obtained with the agreed acceptance criteria. In other words, it may convey very little substantive information about *how* the ITAAC were satisfied, the specific inspection, test, and analytical methods used, or the sensitivity of these allegedly “passing” results to plausible variations in input parameters that could be experienced in real world reactor operation – for example, the specific gas pressures and mixtures of nitrogen-to-hydrogen used to leak-test piping or penetration seals in the primary containment may not match the gas/pressure conditions that would be experienced in an accident.

Moreover, under § 52.99 (c) (2), the required “notification” need only describe the “specific procedures and analytical methods” *to be used* in completing all necessary “inspections, test, and analyses” by any date “*prior to operation*” [emphasis added]. However, any petitioner, meanwhile, must file a hearing request within 60 days of a notice of intended operation, which in turn by statute must be filed “not less than 180 days before the date scheduled for initial loading of fuel into the plant.”

So in the best case, a petitioner for a hearing will have an additional $225 - 180 = 45$ days to make sense out of the ITAAC “notification” report, on top of the usual 60 days to surmount all the other various hurdles to presenting an admissible contention by the hearing request deadline at 120 days prior to scheduled initial loading of the fuel. However, some or possibly even a large number of ITAAC results (that by rule must be specifically contested to gain a hearing) need only be completed “prior to operation,” and thus *may not even be available to the petitioner within the 60-day window for preparing a request.*

⁸ 10 C.F.R. §2.309 (f) (1) (vii)

Moreover, by rule a post-construction hearing request *may not be granted* if it is predicated on demonstrating nonconformance with an ITAAC that the Commission previously found, when it issued a COL license, to have been met earlier in a “referenced early site permit or standard design certification,” which itself may have been granted 15 years before the COL license.⁹

Under these rigidly constrained terms, the Commission is free *to bypass any post-construction hearing request raising a safety issue that is either outside the scope of acceptance criteria specified in the COL, or invokes criteria that the Commission has previously deemed to have been satisfied in a standardized design or early site permit proceeding.* This blinkered approach ignores an obvious and crucial variable – the passage of time can decisively alter both site environmental and emergency planning zone conditions, as well as our technical understanding of nuclear safety and security vulnerabilities.

For example, under current rules, *years-to-decades may elapse between the original design certification or grant of an Early Site Permit, and any notice of intended operation.* In the intervening years, significant new information might well have emerged showing that some modification to the site or the design is needed to ensure adequate protection of public health and safety or (in the face of terrorist threats) the common defense and security.

But in such a case, members of the public seeking to adjudicate their safety concern before a licensing board are invited to submit a 2.206 petition for enforcement action to the Staff, in response to which the Staff is obliged, “before the licensed activity allegedly affected by the petition commences,” to “determine whether any immediate action is required.” Even if the requestor’s petition is *granted*, the rule provides that “fuel loading and operation under the combined license will not be affected...unless the order is made immediately effective.”¹⁰

In sum, the Commission’s legal framework for contested post-construction hearings for COL-licensed facilities is designed to *discourage* and *prevent* “public involvement” in the licensing proceeding, even in the face of serious safety concerns.

VI. Boxing Out the States

The “strict-by-design” contention admissibility requirements, combined with the Commission’s significant curtailment in 2004 of the right to employ trial-type procedures in adjudicatory hearings, raise an interesting question regarding the Commission’s hearing obligations to the States.

Under Sec. 274 (1) of the AEA, the Commission is directed to “afford reasonable opportunity for State representatives to offer evidence, interrogate witnesses, and advise

⁹ 10 C.F.R. 52.103, referencing 52.97 (a) (2)

¹⁰ 10 C.F.R. 52.103 (f)].

the Commission as to the [pending license] application without requiring such representatives to take a position for or against the granting of the application.” Of course, state officials can only engage in such activities if *there is* an adjudicatory hearing process in which to exercise their “reasonable opportunity,” the hearing opportunity includes “witnesses,” and State representatives are allowed to “interrogate” them.

It would be interesting to know how many state officials today would agree that the contention admissibility requirements in § 2.309 (f) afford them a “reasonable opportunity” to participate in the type of adjudicatory hearing that Congress under this paragraph *was clearly assuming would be available to State representatives pursuant to Sec. 189 (a)*. Indeed, the current requirement under § 2.309 (d) (2) that a State desiring to participate as a party in a licensing proceeding must “show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact” *contradicts the right of States under Sec. 274 (l)* of the AEA to participate “without requiring such representatives to take a position for or against the granting of an application.”

Moreover, should the State representatives become admitted parties to an NRC proceeding, under the Administrative Procedures Act (APA), “a party is entitled to present his case or defense *by oral or documentary evidence, to submit rebuttal evidence, and to conduct such cross-examination as may be required for a full and true disclosure of the facts*” (emphasis added).¹¹

The complicated NRC rules adopted in 2004, endowing the presiding officer with increased discretion to determine when and which trial type procedures may be used in a contested proceeding, could well conflict in their concrete application with this simple guarantee of a party’s rights under the APA.

VII. Conclusion

The compartmentalized, tightly-choreographed, and exclusionary character of the current licensing process—in which critical safety determinations are made in disparate, narrowly-focused proceedings with multiple trails of cross-referenced documentation, separated in time, space, and never holistically revisited—increases the risk that serious issues will be overlooked, forgotten, or indeed never identified. But unlike the last big nuclear build out, today’s accretion of exclusionary rules ensures that few if any public interveners will be positioned within the process to force consideration of important safety issues that, for whatever reason, have slipped through the cracks in the Commission’s regulatory scheme.

Madam Chairman, members of the Commission, your licensing Boards are there for a reason. Let them do their work, probing the work of the Applicant and the Staff with the aid of informed and conscientious public intervenors. This was the AEA’s original design, and it is still the right one.

¹¹ APA 5 USC 556.

Acknowledgements

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Appendix

The Big Lockout

Disempowering Citizens from Acting on Their Own Behalf through the Licensing Process Reduces Society's Capacity to:

- **Uncover and Eliminate Potential Precursors to a Nuclear Accident;**
- **Identify and Adopt New Measures to Limit an Accident's Severity and Mitigate Its Consequences; and**
- **Avoid, Contain, or Mitigate Harmful Environmental Impacts from Routine Operations.**

One way to grasp the potential cumulative impact of the NRC's rules restricting public participation is to consider a hypothetical licensing situation at a particular site as it plays out over an extended period of time. The point of this thought experiment is not to assert that the hypothesized sequence of events *will* happen or is even *likely* to happen. The NRC has monitoring and enforcement mechanisms outside the licensing process that are designed to avert such worst-case outcomes.

Rather the point is to demonstrate how the NRC's demanding contention admissibility and other requirements for participation in the licensing process, in concert with the segmented Part 52 licensing process itself, undermine the public's right to meaningfully participate in NRC licensing proceedings, up to and including judicial review of the agency's decisions, and that abetting this participation would make the scenario *less likely* to happen. In other words, the current suite of NRC rules *disempowers citizens* who are concerned enough about protecting their communities and natural resources that they seek to have their concerns adjudicated within the NRC's licensing process.

Let us stipulate that in the year 2013, "ABC Nuclear Engineering, Inc." receives a "standard design certification" in a generic rulemaking for a new modular multi-unit nuclear plant design that has never been constructed before. It is strictly a conceptual design, defined by computer simulations of core behavior and CAD modeling of its major design elements. No utility or merchant generator has either ordered or expressed any intention to build this design. The design certification expires in 2028, but can be "renewed" for another 15 year period, and stays in effect while a renewal is under review. But natural gas prices plummet and ABC puts its certified design on the shelf and waits for a more favorable price environment for nuclear.

Let us further stipulate that five years earlier, in 2008, merchant generator “DEF Nuclear, LLC” sought and received an Early Site Permit to locate a new unit at its existing site on Lake Arabella, an artificial cooling lake somewhere in the mid-South that already has two older nuclear units coming up for license extension within the next 15 years. DEF Nuclear negotiated with several vendors at the time who were seeking standard design certification, but could not come to terms on price, and some of the vendors looked incapable of delivering a producible certified design in any case. Natural gas prices plummeted and looked to stay low for a long time, so DEF Nuclear filed away its ESP, which is good until 2028. It can be renewed for another 20 year term, and the existing permit stays in effect while the renewal request is under NRC review.

Skip ahead 15 years. Natural gas prices are on the rise again, and DEF Nuclear dusts off its ESP at Lake Arabella and shops around for a unit that fits within the “environmental envelope” approved for the site 15 years earlier. Lake residents are already on edge and reeling from a peculiar experience. The two nearly 40 year old reactors have recently experienced tritium leaks, breaks in steam generator tubing, and numerous unplanned shutdowns due to faulty electrical systems that triggered the startup of backup power systems that failed to operate properly. To their surprise, when they sought a public hearing on the problems at the plant in connection with license renewal, they were told that *their safety concerns had nothing to do with the license renewal proceeding and would not get a hearing*, but they were encouraged to write letters drawing the NRC’s attention to their concerns. The letters were duly written, but nothing in particular happened in response, and the operating licenses for the two older units were duly extended for 20 years, *without any requirement or commitment to install new safety equipment*. Instead, the company pledged to vigorously pursue multiple programs for “aging management” of its safety-related systems and components. DEF Nuclear was pleased with the outcome, as it freed up corporate funds that could be directed toward building a new unit at the site.

It’s now 2023. ABC Nuclear Engineering, Inc. has gone out of business, but a small group of its former employees retain the rights to its “certified design,” which DEF Nuclear LLC manages to license for a song. DEF Nuclear then submits a COL application to the NRC *referencing this 10 year old design*, which it plans to build at its Lake Arabella site, *referencing its 15 year old ESP*.

Lake residents who are concerned about the construction of a third nuclear plant in their community, right next door to the old nuclear units, seek to intervene in the COL proceeding. They are relying on the concerns expressed by a retired nuclear engineer who lives at the lake, who has done some back-of-the-envelope calculations regarding the safety of this little known and never-built design. But when they seek a hearing, they are told the NRC made a final design decision certifying the safety of this design a decade ago, and *the matter of its safety cannot be reopened in a COL proceeding*.

When other experts, from the State DEQ, advise Lake residents that an additional nuclear unit drawing water from the lake for cooling will overtax its heat dissipation capacity—leading to unhealthful elevated lake temperatures during the summer months when their children are most likely to be in the water, as well as low lake levels during drought conditions that could jeopardize competing downstream uses—they are told that *this issue was resolved 15 years and is no longer a suitable subject for a contested hearing*.

When the local county board points to a significant increase in year-round population around the lake, and a major influx of summer residents, and suggests the existing county road network may not be able to handle the sudden traffic flow required for timely evacuation in a severe accident, *they are told this issue too was “resolved” many years ago in the ESP proceeding, and cannot be reopened now.*

In 2025, the NRC issues DEF Nuclear, LLC a combined license to construct and operate a new plant at the Lake Arabella site, which license “references” the design certified 12 years before and the ESP approved 17 years earlier. All the members of the NRC team that worked on the safety certification of this particular design have since retired or left the agency. Ditto for the ESP, which had progressed through so many post-docketing iterations en route to approval that public intervenors had given-up trying to keep-up with the changes. But the new design fits within the “environmental envelope” approved by the ESP, so there is no fresh consideration of the suitability of this site to accommodate *the particular characteristics* of the certified design. Construction of the new units goes ahead, but deployment is in individual silos without the massive reinforced concrete “base mat” that the 17-year old ESP assumed would mitigate the seismic hazards of this particular site.

In 2030, five years into construction, the aforementioned retired nuclear engineer hears from a Chinese colleague regarding a similar prototype design that has just started-up in China. The colleague’s information raises concerns regarding the safety characteristics of the Lake Arabella units in certain off-normal operating conditions. But when Lake residents request a hearing on these safety concerns, prior to operation of the plant, they are told that they have no right to a hearing on these issues because *they have not demonstrated that the completed plant fails to meet any of the “acceptance criteria” specified in its combined license.*

The first-of-a-kind commercial plant goes into operation, but the Chinese operational test data suggests that the neutronic behavior of modular cores subjected to sudden changes in coolant flow may have been incorrectly modeled in the original design certification. Soon after connection to the grid, this lack of understanding fatefully intersects with the failure to review the plant’s specific geotechnical compatibility with the ESP-approved site without the previously assumed thick concrete base mat. During a local strong local seismic event, this regulatory gap leads to local ground liquefaction, followed by immersion and shorting of buried safety-related electrical cables. This in turns triggers a loss of power to key safety systems, inability to control coolant flow, and a power surge in the reactor, followed by overheating of the core, runaway fuel-cladding oxidation, and a hydrogen explosion.

The final blow is a break in the 50 year-old dam that forms the cooling lake, the seismic resistance of which *was never reevaluated in connection with either the granting of the ESP, the license extensions for the existing units, or the combined license for the new modular plant.* A potential dam break was considered a “beyond design basis” event and outside the scope of any of *these multiple segmented license approvals extending over decades.* The dam break swiftly drains the cooling lake, triggering a loss of ultimate heat sink, and the severe nuclear accident spreads to all units at the site.

An evacuation is ordered, but the Lake area is packed with summer visitors, and evacuation routes below the dam are washed out. Boat trailers and RV's clog the remaining narrow roadways leading away from the Lake, the capacity of which was never reevaluated in light of the ESP's early "resolution" of emergency planning issues. Thousands are caught in the plume exposure pathway of the accident, and receive harmful radiation doses. The plant is destroyed, and the lake area, state park, and surrounding farmlands severely contaminated. Compensation costs to individuals and economic damage to the site and region exceed \$100 billion.