

BEFORE THE UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY

ANIMAL LEGAL DEFENSE FUND, BUFFALO RIVER WATERSHED ALLIANCE (ARKANSAS), CENTER FOR BIOLOGICAL DIVERSITY, CENTER FOR FOOD SAFETY, CENTER ON RACE, POVERTY, & THE ENVIRONMENT (CALIFORNIA), CLEAN WATER FOR NORTH CAROLINA (NORTH CAROLINA), EARTHJUSTICE, ENVIRONMENTAL INTEGRITY PROJECT, FARM AID, FRIENDS OF THE EARTH, FRIENDS OF FAMILY FARMERS (OREGON), FRIENDS OF TOPPENISH CREEK (WASHINGTON), FOOD ANIMAL CONCERNS TRUST, FOOD & WATER WATCH, GOVERNMENT ACCOUNTABILITY PROJECT, HUMANE SOCIETY OF THE UNITED STATES, IOWA CITIZENS FOR COMMUNITY IMPROVEMENT (IOWA), INSTITUTE FOR AGRICULTURE & TRADE POLICY, JOHNS HOPKINS CENTER FOR A LIVABLE FUTURE, NORTH CAROLINA CONSERVATION NETWORK (NORTH CAROLINA), PUBLIC JUSTICE, SOCIALLY RESPONSIBLE AGRICULTURE PROJECT, SOUTHERN ENVIRONMENTAL LAW CENTER, AND WATERKEEPER ALLIANCE

Petitioners,

v.

MICHAEL REGAN, ADMINISTRATOR,
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Respondent.

PETITION TO RESCIND THE AIR CONSENT AGREEMENT
AND ENFORCE CLEAN AIR LAWS AGAINST ANIMAL FEEDING OPERATIONS

TABLE OF CONTENTS

I. INTRODUCTION1

II. AIR POLLUTION FROM AFOs HAS SERIOUS HEALTH IMPACTS ON SURROUNDING COMMUNITIES.....2

III. THE AIR CONSENT AGREEMENT SHIELDS AFOs FROM EPA ENFORCEMENT ACTIONS.5

A. Rather than Enforce the Law, EPA Worked with Industry to Craft the Air Consent Agreement.5

B. The Air Consent Agreement Provided a Safe Harbor from Enforcement of Federal Law Pending the Finalization of EEMs.....6

C. The Environmental Appeals Board and the D.C. Circuit Court of Appeals Allowed EPA to Implement the Air Consent Agreement.....8

D. EPA Has Relied On The Air Consent Agreement To Deny Petitions To Regulate Air Emissions from AFOs.10

IV. EPA’S MONITORING STUDY WAS FLAWED, UNDERMINING EPA’S ABILITY TO DEVELOP VALID EEMs.....12

A. EPA Limited the Size and Geographic Scope of its Study, Despite the Entry of Nearly 14,000 AFOs into the Agreement.....12

B. EPA Failed to Generate Adequate Data to Develop EEMs.....15

C. EPA Failed to Finalize EEMs Following the Completion of NAEMS.17

D. EPA Has Failed to Consider Available Information from Peer-Reviewed Studies.18

E. The 2017 OIG Report Urged EPA to Either Finalize the EEMs or End the Agreement. .20

V. EPA SHOULD TERMINATE THE AIR CONSENT AGREEMENT BECAUSE EPA HAS FAILED TO PRODUCE VALID EEMs.....23

A. EPA Should Abandon the Fundamentally Flawed NAEMS and EEMs Development Process in Favor of Existing Models.....23

B. EPA Overstates the Difficulty of Developing Process-Based Models, Which the Agency Is Already Using in Other Contexts.25

VI. IF EPA DECIDES TO PROCEED WITH THE FLAWED EEM DEVELOPMENT PROCESS, IT MUST IMMEDIATELY RESCIND THE SAFE HARBOR PROVISION. 29

A. EPA Should Immediately Rescind the Safe Harbor Provisions of the Air Consent Agreement.29

B. EPA Should Not Finalize Any EEMs Without Robust Public Participation.29

VII. CONCLUSION32

I. INTRODUCTION

Rural communities deserve a safe, prosperous, and plentiful food system rooted in dignity and respect. In this system, Black, Indigenous, Latino, Asian, and white communities enjoy clean land, air, and water where independent family farms and renewable energy build diversified, local, and thriving rural economies. Sadly, past administrations have prioritized the interests of corporate-controlled industrial agriculture over the well-being of rural communities. Corporate integrators, trade groups, and other powerful titans of industry, have flourished while communities and farmers have suffered through years of pollution, hollowed out Main Streets, and declining economic opportunities. This has led to what any neutral observer would decry as undemocratic oppression and exploitation. Our government has the duty and authority to protect the health and well-being of our communities by enforcing federal air pollution laws, which do not exempt this industrial system.

Over sixteen years ago, the Environmental Protection Agency (EPA), under the President George W. Bush administration, announced an Agreement and Final Order it had secretly negotiated with the National Pork Producers Council. In the agreement, EPA refrained from enforcing key air pollution control and public disclosure laws against any animal feeding operation (AFO) that agreed to pay a nominal penalty to fund a nationwide air monitoring program to establish Emission Estimating Methodologies (EEMs) for AFOs.¹ Nearly *14,000* AFOs signed up for this sweetheart deal, known as the Air Consent Agreement. By its own terms, this deal should have been completed over a decade ago, in 2010.² Yet, as of the date of this letter, EPA has yet to finalize *any* EEMs or end the Air Consent Agreement. As a result of EPA's protracted delay, thousands of the nation's largest AFOs continue to enjoy protection from EPA enforcement actions, even if their emissions exceed permit limits or reporting thresholds. EPA's implementation of the Air Consent Agreement over the past three presidential administrations demonstrates a complete, bipartisan abdication of EPA's enforcement authority.

¹ Notice of Animal Feeding Operation Consent Agreement & Final Order, 70 Fed. Reg. 4957 (Jan. 31, 2005) [hereinafter 2005 Notice]; *see also id.* at 4962 Appendix 1: Air Consent Agreement [hereinafter 2005 Air Consent Agreement].

² EPA OIG, IMPROVING AIR QUALITY: ELEVEN YEARS AFTER AGREEMENT EPA HAS NOT DEVELOPED RELIABLE EMISSIONS ESTIMATION METHODS TO DETERMINE WHETHER ANIMAL FEEDING OPERATIONS COMPLY WITH CLEAN AIR ACT AND OTHER STATUTES, Report No. 17-P-0396, at 5 (Sept. 19, 2017) [hereinafter 2017 OIG REPORT], available at https://www.epa.gov/sites/default/files/2017-09/documents/epa_oig_20170919-17-p-0396.pdf.

Pursuant to the right to petition the government provided in the First Amendment to the U.S. Constitution³ and the Administrative Procedure Act,⁴ Petitioners formally submit this petition to EPA to put an end to the enforcement amnesty. The Petitioners collectively represent millions of citizens from across the United States, including many individuals adversely impacted by CAFO air pollution in their communities.

We request your written response regarding this unacceptable dereliction of duty within **30 days** of receiving this Petition. We ask that you rescind the Air Consent Agreement, take all actions consistent with President Biden's executive orders to enforce all applicable laws against AFOs, and prioritize environmental justice in enforcement and climate actions. If you instead wish to continue the policies of the past three administrations, please set forth the reasons for refusing to grant this petition.

II. AIR POLLUTION FROM AFOs HAS SERIOUS HEALTH IMPACTS ON SURROUNDING COMMUNITIES.

Air pollution is the largest environmental mortality risk factor in the United States, and agriculture—particularly industrial animal production—is a major contributor to reduced air quality.⁵ According to a recent study published in the Proceedings of the National Academy of Sciences of the United States (PNAS), air pollution from U.S. agriculture includes direct emissions of fine particulate matter (PM_{2.5}) and PM_{2.5} precursors such as ammonia (NH₃), nitrogen oxides (NO_x), sulfur dioxide (SO₂), and volatile organic compounds (VOCs).⁶ This pollution causes 17,900 U.S. deaths per year, with 15,900 deaths from food production and 2,000 deaths linked to nonfood products.⁷ Of the 15,900 deaths from food production, 80 percent, or 12,700 deaths, are attributable to industrial animal production, with the remaining 20 percent

³ U.S. CONST. amend. I.

⁴ 5 U.S.C. 553(e).

⁵ J. Stanaway et al., *Global, Regional, & National Comparative Risk Assessment of 84 Behavioural, Environmental, & Occupational, And Metabolic Risks or Clusters of Risks For 195 Countries & Territories, 1990-2017*, 392 LANCET 1923 (2018), <https://www.thelancet.com/action/showPdf?pii=S0140-6736%2818%2932225-6>; J. Lelieveld et al., *The Contribution Of Outdoor Air Pollution Sources To Premature Mortality On A Global Scale*, 525 NATURE 367 (2015); S. Bauer et al., *Significant Atmospheric Aerosol Pollution Caused By World Food Cultivation*, 43 GEOPHYS. RES. LETT. 5394 (2016), <https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1002/2016GL068354>.

⁶ N. Domingo et al., *Air Quality-Related Health Damages of Food*, 118 PNAS e2013637118, 1 (2021), <https://www.pnas.org/content/pnas/118/20/e2013637118.full.pdf>.

⁷ *Id.*

attributable to plant-based foods.⁸ The majority of deaths—12,400 deaths each year—are attributable to ammonia acting as a PM_{2.5} precursor.⁹ The study noted that on-farm emission reduction interventions, such as improved livestock waste management and fertilizer application practices, combined with dietary shifts toward more plant-based foods, could dramatically reduce the number of mortalities caused by this industry.¹⁰

Another recent study found that poultry AFOs in Pennsylvania were a major risk factor for pneumonia.¹¹ The authors observed that “[e]xposure to air pollutants such as particulate matter . . . reduc[es] the lung’s defenses against bacterial pathogens, thereby increasing susceptibility to respiratory infections.”¹² In addition, the authors also noted that

As a source of air pollution, industrial food animal production can compromise respiratory health. These large, homogeneous, densely packed livestock operations emit particulate matter, endotoxins, and other pollutants, which spread downwind through ventilation fans and emissions from decomposing manure. Adverse effects on lung function and increased respiratory symptoms have been reported among individuals living near [industrial food animal production], particularly among susceptible groups.

The study found a 66 percent increase in the odds of being diagnosed with community-acquired pneumonia among people living closest to high-density poultry operations, demonstrating that “residing closer to more and larger poultry operations was associated with [community-acquired pneumonia], a cause of significant morbidity and mortality.”¹³

EPA is culpable for many of these deaths and illnesses. For nearly two decades, EPA’s sustained approach of ignoring pollution generated by the AFO industry under the guise of the Air Consent Agreement has resulted in the emission of significant amounts of unchecked air pollution, including ozone, PM_{2.5}, nitrogen oxides, sulfur dioxide, and VOCs—pollutants that EPA is required to regulate under the Clean Air Act (CAA). To make matters worse, during this

⁸ *Id.* at 2.

⁹ *Id.* at 1.

¹⁰ *Id.*

¹¹ M. Poulsen et al., *High-Density Poultry Operations & Community-Acquired Pneumonia in Pennsylvania*, 2 ENV’T. EPIDEMIOLOGY e013 (June 2018), https://journals.lww.com/environepidem/Fulltext/2018/06000/High_density_poultry_operations_and.5.aspx.

¹² *Id.* at 1.

¹³ *Id.* at 6.

same period EPA moved to exempt the industry from having to comply with two critical pollution reporting statutes: the Emergency Planning and Community Right to Know Act (EPCRA), and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA),¹⁴ resulting in reduced public access to the information that affected communities need to protect themselves, and likely in turn contributing to greater mortality in communities surrounding these operations.

In 2013, scientists at John Hopkins University analyzed the practical public health impacts of EPA's efforts to limit public access to information about pollution from AFOs.¹⁵ As the authors summarized:

Despite literature associating AFOs with compromised air quality and residential proximity to AFOs with adverse health outcomes, availability of information concerning AFO airborne hazardous releases ranged from limited to nonexistent across the states that we examined These data gaps compromise the ability of public health officials and scientists to characterize exposures and risks, and limit their ability to implement and evaluate interventions when appropriate. The lack of data also means that information on AFO hazardous releases is not available to residents of affected communities.¹⁶

EPA's failure to address harmful emissions, compounded by its efforts to keep citizens in the dark about AFO pollution, has contributed to serious public health impacts.

¹⁴ CERCLA/EPCRA Administrative Reporting Exemption for Air Releases of Hazardous Substances from Animal Waste at Farms, 73 Fed. Reg. 76,948 (Dec. 18, 2008) (exempting airborne hazardous releases from animal waste at farms (including AFOs) from CERCLA and EPCRA reporting requirements); *Waterkeeper Alliance v. EPA*, 853 F.3d 527, 537–38 (D.C. Cir. 2017) (vacating EPA's 2008 rule and rejecting EPA's argument that the reporting requirements serve no regulatory purpose); Vacatur Response—CERCLA/EPCRA Administrative Reporting Exemption for Air Releases of Hazardous Substances From Animal Waste at Farms; FARM Act Amendments to CERCLA Release Notification Requirements, 83 Fed. Reg. 37444 (Aug. 1, 2018) (incorporating revisions enacted by the FARM Act, which exempts farms from CERCLA release reporting requirements, despite the D.C. Circuit's vacatur of the 2008 final rule in *Waterkeeper Alliance v. EPA*); Amendment to Emergency Release Notification Regulations on Reporting Exemption for Air Emissions from Animal Waste at Farms; Emergency Planning and Community Right to Know Act 84 Fed. Reg. 27,533 (June 13, 2019) (adding the reporting exemption for air emissions from animal waste at farms provided in section 103(e) of CERCLA); see also EPA, *CERCLA & EPCRA Reporting Requirements for Air Releases of Hazardous Substances from Animal Waste at Farms*, EPA (last visited Oct. 21, 2021), <https://www.epa.gov/epcra/cercla-and-epcra-reporting-requirements-air-releases-hazardous-substances-animal-waste-farms>.

¹⁵ T. Smith et al., *Availability of Information about Airborne Hazardous Releases from AFOs*, 8 PLOS ONE e85342 (2013), <https://doi.org/10.1371/journal.pone.0085342>.

¹⁶ *Id.* at 7.

III. THE AIR CONSENT AGREEMENT SHIELDS AFOs FROM EPA ENFORCEMENT ACTIONS.

A. Rather than Enforce the Law, EPA Worked with Industry to Craft the Air Consent Agreement.

In the early 2000s, after years of dereliction by AFO operators of their obligation to seek CAA permits and report emissions under CERCLA and EPCRA, EPA took a series of legal actions designed to bring delinquent AFOs into the CAA permitting program.¹⁷ Those legal actions constitute the last time EPA meaningfully enforced the CAA against AFO polluters.

Instead of continuing to use litigation or other comparable methods to move AFOs into compliance with their obligations under the CAA, EPA spent three years crafting a backroom deal with representatives of the pork industry, egg producers, and other AFO industry groups for a “safe harbor” against enforcement in the form of a release and covenant not to sue for potential violations of the CAA, CERCLA, and EPCRA. As outlined in a memorandum sent to EPA officials in June 2002, industry representatives offered to fund a nationwide air emissions monitoring study to collect emissions data from AFOs in exchange for enforcement protection.¹⁸ The industry’s June 2002 safe harbor proposal formed almost verbatim the Air Consent Agreement that EPA published for voluntary enrollment in early 2005.¹⁹

Under the Agreement secretly negotiated with industry representatives, EPA promised not to sue AFOs for violating CAA permitting requirements or CERCLA/EPCRA reporting requirements in exchange for AFOs paying a nominal civil penalty to fund the nationwide air emissions monitoring study.

¹⁷ See, e.g., Press Release, Dep’t of Justice, Ohio’s Largest Egg Producer Agrees to Dramatic Air Pollution Reductions from Three Giant Facilities (Feb. 23, 2004), https://www.justice.gov/archive/opa/pr/2004/February/04_enrd_105.htm; 2017 OIG REPORT at 17 (“[M]onitoring conducted as part of an EPA enforcement case in 2003 demonstrated . . . total PM emissions of 550 and 700 tons per year at two large egg-layer AFOs,” significantly “exceed[ing] the 250-tons-per-year permitting threshold for PM emissions.”); see also Press Release, Dep’t of Justice, Government Reaches Settlements with Seaboard Foods and PIC USA (Sept. 15, 2006), https://www.justice.gov/archive/opa/pr/2006/September/06_crm_625.html; Press Release, Dep’t of Justice, Nation’s Second Largest Hog Producer Reaches Settlement With U.S. & Citizen’s Group (Nov. 1, 2001), https://www.justice.gov/archive/opa/pr/2001/November/01_enrd_604.htm.

¹⁸ 2002 Industry Safe Harbor Proposal.

¹⁹ See *id.*; 2005 Notice at 4958.

B. The Air Consent Agreement Provided a Safe Harbor from Enforcement of Federal Law Pending the Finalization of EEMs.

The Air Consent Agreement outlines two main sections: (1) the Consent Agreement, and (2) the Monitoring Fund. The Consent Agreement includes the main terms of the Agreement between participating AFOs and the government, including a safe harbor under which the government releases and covenants not to sue participating AFOs for civil violations of the CAA; section 103 of CERCLA; and section 304 of EPCRA.²⁰ In exchange for this enforcement forbearance from EPA, participating AFOs agreed to pay a nominal penalty, as well as a payment of \$2,500 per facility, into a fund known as the Monitoring Fund, which was then to be used to finance the two-year National Air Emissions Monitoring Study (NAEMS).²¹

The Agreement's safe harbor provision covers two substantive Clean Air Act permitting programs, the Title V operating permit program, and applicable State Implementation Plan (SIP) requirements for VOC, ammonia, hydrogen sulfide, and particulate matter. First, it includes the requirements applicable to new and expanding major stationary sources under Parts C and D of Title I, Prevention of Significant Deterioration (PSD) and New Source Review (NSR).²² Second, it includes operating permits required under Title V for major stationary sources.²³ Third, it includes any SIP requirements that regulate the rate, quantity, or concentration of the covered air pollutants.²⁴

In all three permitting programs, the severity of the air pollution in a given air basin determines whether a stationary source exceeds a certain tons per year threshold and thus must obtain a permit under PSD, NSR, and Title V as a major stationary source. This threshold ranges from 10 tons per year in an extreme ozone nonattainment area to 250 tons per year in an area that attains the applicable National Ambient Air Quality Standard.

²⁰ 2005 Air Consent Agreement at ¶¶ 7–23.

²¹ *Id.* at ¶ 53.

²² *Id.* at ¶ 26; 42 U.S.C. §§ 7470-7515.

²³ 2005 Air Consent Agreement at ¶ 26; 42 U.S.C. §§ 7661–7661f.

²⁴ 2005 Air Consent Agreement at ¶ 26.

The Agreement's safe harbor provision covers two reporting requirements: section 103 of CERCLA,²⁵ and section 304 of EPCRA. EPCRA contains a general requirement that facilities that "release" more than a threshold quantity of an "extremely hazardous substance" must report that release to local emergency response agencies, and that those reports must be made available to the public.²⁶ Immediate release reporting under EPCRA provides local and state emergency responders with information critical to appropriately assessing and safely responding to citizen complaints of suspicious or noxious odors. EPA lists ammonia and hydrogen sulfide as "extremely hazardous substances" under EPCRA and lists a reportable quantity of 100 pounds per day. The Air Consent Agreement's safe harbor provision continues to exempt participating AFOs from EPA enforcement for failing to report these releases.

According to EPA, its reason for exchanging a safe harbor from enforcement of the CAA, CERCLA, and EPCRA for a two-year monitoring study was to timely "collect data and aggregate it with appropriate existing emissions data; analyze the monitoring results; and create tools (e.g., tables and/or emission models) that AFOs could use to determine whether they emit pollutants at levels that require them to apply for permits under the CAA or submit notifications under CERCLA or EPCRA."²⁷ And further, because the monitoring study would be "designed to generate scientifically credible data to provide for the characterization of emissions from all major types of AFOs in all geographic areas where they are located," it would ultimately be used "to produce a scientifically sound basis for measuring and estimating air emissions from AFOs" through EEMs.²⁸ Thus, EPA provided that the reason for the Agreement was to ensure "the achievement of real environmental benefits to protect public health and the environment while supporting a sustainable agricultural sector."²⁹

To that end, once the final EEMs are published the participating AFOs would have a defined amount of time to apply the EEMs to their operations and determine whether any CAA, CERCLA, or EPCRA statutory obligations apply, and, if so, bring their operations into

²⁵ Subsequently, the Fair Agricultural Reporting Method (FARM) Act expressly exempted reporting of air emissions from animal waste at a farm from CERCLA section 103. *See* Pub. L. 115-141 § 1101-03 (codified at 42 U.S.C. § 9603(e) (2018)).

²⁶ 42 U.S.C. § 11004(a).

²⁷ 2005 Notice at 4960.

²⁸ *Id.*

²⁹ *Id.* at 4961.

compliance with those requirements.³⁰ Once a participating AFO complies with each of those requirements, “the statute of limitations for all claims covered by the release and covenant not to sue . . . will be tolled from the date this Agreement is approved by the [Environmental Appeals Board] until . . . 120 days after Respondent files the required certification . . . or December 31, 2011,” whichever is earlier.³¹ In the alternative, if EPA determines that it cannot develop EEMs, then it should notify participants that the Air Consent Agreement, including its enforcement amnesty, will come to a close.³² As the amnesty tolling provision suggests, EPA anticipated that the terms of the Air Consent Agreement would be met and the Agreement fulfilled before 2012 at the latest.³³

The Air Consent Agreement embodies a highly unusual enforcement philosophy inconsistent with the Clean Air Act’s enforcement scheme. EPA alleged violations prior to any investigation, assessed civil penalties without considering civil penalty factors, and invited participants to enter into the Agreement after it had already been negotiated for years with the industry. By its own terms, the Agreement deferred enforcement until the Agency developed EEMs, which EPA expected to complete within 18 months of completing NAEMS.

C. The Environmental Appeals Board and the D.C. Circuit Court of Appeals Allowed EPA to Implement the Air Consent Agreement.

To enter the Air Consent Agreement, an AFO owner or operator needed only to inform EPA of its election to participate and provide EPA with certain information regarding the size and number of AFOs that they designated for inclusion. In total, nearly 2,600 participants, representing 13,900 AFO facilities in 42 states, entered into the Air Consent Agreement.³⁴ “According to the EPA, these 13,900 AFOs comprise more than 90 percent of the largest AFOs in the United States,” and included participants from across the broiler chicken, egg layer, hog, and dairy industries.³⁵

³⁰ 2005 Air Consent Agreement at ¶ 28.

³¹ *Id.* ¶ 31.

³² *Id.* ¶ 38.

³³ *Id.*; *see also* 2017 OIG REPORT at 5 (providing that “[b]ased on . . . original expectations, . . . AFOs would have obtained any necessary permits and installed emission controls by 2010”).

³⁴ 2017 OIG REPORT at 6.

³⁵ *Id.*

In 2006, EPA’s Environmental Appeals Board (EAB) approved individual Consent Agreements in batches. In addition to ratifying the Agreements, EAB affirmed EPA’s authority to enter into the Agreement as an administrative enforcement action.³⁶ The relevant penalties and monitoring funds were collected from individual participants as well as from the National Pork Board, which provided at least \$6,000,000 towards payment of these fees on behalf of hog producers rather than the producers paying those fees themselves.³⁷ The NAEMS process then began in earnest in 2007—the year NAEMS monitoring should have been completed according to the original timeline. It continued for three years, rather than two, and “completed in early 2010, about 2 years later than originally expected.”³⁸

Several environmental and community groups challenged the Air Consent Agreement as a rulemaking that violated the CAA, CERCLA, EPCRA, and public notice and comment requirements. The D.C. Circuit Court of Appeals denied the groups’ consolidated petitions for review, holding that the Agreement is an enforcement action not subject to judicial review.³⁹

In its briefing before the D.C. Circuit, EPA took the legal position that the safe harbor was a “limited covenant not to sue” that would last approximately three and a half years until 2010.⁴⁰ The court took EPA at its word, concluding that the Agreement “merely defers enforcement” and a “limited deferral subject to enforcement conditions works no change in the agency’s substantive interpretation or implementation of the Acts.”⁴¹ The court also rejected the

³⁶ See, e.g., *In re Consent Agreements & Proposed Final Orders for AFOs*, 2006 WL 478143 (EAB Jan. 27, 2006) (finding that first twenty Agreements were administrative penalty orders subject to Board review).

³⁷ Initially, the National Pork Board was enjoined from contributing \$6,000,000 on behalf of producers because the contribution was found to violate the Pork Act and contravene public policy, but this decision was reversed by a second administrative law judge allowing the National Pork Board to pay farmer’s fees associated with EPA’s Air Emission Study. See *In re: McDowell*, 65 Agric. Dec. 795 (U.S.D.A. 2006) *rev’d*, *In re: McDowell*, 67 Agric. Dec. 1230, 1232 (U.S.D.A. 2008) (“revers[ing] the ALJ’s Initial Decision [and granting Administrator’s motion to dismiss] [because] Petitioners lack standing, the Second Amended Petition fails to state a legally cognizable claim, and the National Pork Board’s payment of the per-farm-fee associated with EPA’s Air Emissions Study is in accordance with the Pork Act and the Pork Order”).

³⁸ 2017 OIG REPORT at 11; 10 (“Based on the original expectations for completion of the tasks in the Notice, the NAEMS monitoring would have been completed in 2007, and the EPA would have begun publishing EEMs in 2009.”); 12 (Figure 4) (comparing expected and actual NAEMS development timeline).

³⁹ *Ass’n of Irrigated Residents v. EPA*, 494 F.3d 1027, 1031 (D.C. Cir. 2007).

⁴⁰ See EPA’s Brief at 11-12, 23, 28, (D.C. Cir. Feb. 2, 2007).

⁴¹ *Ass’n of Irrigated Residents*, 494 F.3d. at 1033.

groups’ contention that EPA had abdicated its enforcement duty because the court believed the limited deferral “is part of the agency’s attempt to ensure that AFOs comply with the Acts.”⁴²

Had the court understood that EPA would extend its “limited” deferral for over ten years to 2021 and beyond—straight through the Obama and Trump Administrations—then that unbound deferral would undoubtedly have affected the court’s analysis.

D. EPA Has Relied On The Air Consent Agreement To Deny Petitions To Regulate Air Emissions from AFOs.

To make matters worse, in addition to using the Air Consent Agreement and EEM process as a shield against adequately enforcing the CAA or EPCRA against AFO polluters, EPA is using the Agreement as an excuse to deny or ignore every administrative petition related to AFO air pollution that has been filed with the Agency since 2005. EPA is also allowing AFOs to use the Agreement to keep citizens from enforcing EPCRA.

Since 2005, EPA has received several administrative rulemaking petitions to address AFO emissions, including a 2009 petition to list and regulate AFOs as a source category under CAA Section 111 (2009 CAFO Source Petition),⁴³ and a 2011 petition to regulate ammonia as a criteria pollutant under CAA Sections 108 and 109 (2011 Ammonia Petition).⁴⁴ According to a report by EPA’s Office of the Inspector General (OIG), discussed further below, “EPA staff told [OIG] they did not plan to evaluate the need for additional regulations as laid out in these petitions until the EEMs are finalized.”⁴⁵

For the 2009 CAFO Source Petition, EPA’s refusal to engage with the subject matter of the petition came in the form of a denial of the petition in 2017.⁴⁶ As noted in the denial signed by former EPA Administrator Scott Pruitt, EPA explicitly denied the petition not on the

⁴² *Id.* at 1035.

⁴³ The Humane Soc’y of the U.S., Petition to the U.S. EPA to List Concentrated Animal Feeding Operations Under CAA Section 111 (B)(1)(A) (Sep. 21, 2009).

⁴⁴ Environmental Integrity Project, Petition to the U.S. EPA for the Regulation of Ammonia as a Criteria Pollutant Under Clean Air Act Sections 108 and 109 (Apr. 6, 2011).

⁴⁵ 2017 OIG REPORT at 18.

⁴⁶ Denial of Petition to List Concentrated Animal Feeding Operations Under Clean Air Act, 82 Fed. Reg. 60,940 (Dec. 26, 2017).

substance of the request,⁴⁷ but rather due to the “ongoing budgetary uncertainties” and EEM process.⁴⁸ Acknowledging the findings of the 2017 OIG Report, the denial letter then goes on to say that EPA will conduct a systematic planning process as identified in that report by April 2018 and establish milestones for issuing updated draft EEMs by July 2018.⁴⁹ A comprehensive set of draft or final EEMs still has yet to be issued, but EPA continues to use the EEM process as a convenient excuse not to take further action to *actually address* and limit air pollution from concentrated animal feeding operations (CAFOs), as this petition would have enabled.

With respect to the 2011 Ammonia Petition, EPA has failed to respond—even as the evidence of harm continues to mount.⁵⁰ As mentioned above, public health scientists have drawn clear connections between ammonia from animal production and thousands of annual PM-related deaths, and have also shown that living in close proximity to AFOs is associated with pneumonia.⁵¹ Another study found significant associations between Pennsylvania CAFOs and asthma.⁵² The authors of the ammonia study noted that industrial food animal production facilities “are a source of odors and several air pollutants, including particulate matter, hydrogen sulfide, and ammonia,” and “these air pollutants and odors have been associated with asthma exacerbations.”⁵³ The role of ammonia in exacerbating water quality impairments has also become more clear over time. It now appears that AFOs emit more ammonia—and more ammonia deposits closer to the source of emissions than previously thought.⁵⁴ This means that

⁴⁷ Letter from E. Scott Pruitt, Administrator, EPA, to Tom Frantz, President, Ass’n of Irrigated Residents, at 2 (Dec. 15, 2017) (“This denial is not based on a determination as to whether CAFOs meet the requirements for listing under CAA section 111(b)(1)(A).”).

⁴⁸ *Id.* at 1–2.

⁴⁹ *Id.* at 8–9.

⁵⁰ Although the petitioners challenged EPA’s failure to respond in 2015 (re-filed in 2016), petitioners voluntarily dismissed the complaint in 2017. See Notice of Voluntary Dismissal, *Environmental Integrity Project et al. v. EPA*, Case No. 16-cv-02203-ABJ (D.D.C. Jan. 17, 2017).

⁵¹ See *supra* Part II.

⁵² S. Rasmussen et al., *Proximity to Industrial Food Animal Production & Asthma Exacerbations in Pennsylvania, 2005-2012*, 14 INT’L J. ENV’T. RESH. PUB. HEALTH 362 (2017).

⁵³ *Id.*

⁵⁴ See, e.g., ENV’T INTEGRITY PROJECT, AMMONIA EMISSIONS FROM POULTRY INDUSTRY MORE HARMFUL TO CHESAPEAKE BAY THAN PREVIOUSLY THOUGHT (2018), <https://environmentalintegrity.org/wp-content/uploads/2017/02/Ammonia-Report.pdf>; see also ENV’T INTEGRITY PROJECT, POULTRY INDUSTRY POLLUTION IN THE CHESAPEAKE REGION (2020), <https://environmentalintegrity.org/wp-content/uploads/2020/04/EIP-Poultry-Report.pdf>; J. Baker et al., *Modeling & Measurements of Ammonia from Poultry Operations: Their Emissions, Transport, & Deposition in the Chesapeake Bay*, 706 SCI. TOTAL ENVIRONMENT 135290 (Mar. 2020), <https://www.sciencedirect.com/science/article/pii/S0048969719352829>.

ammonia is a central contributor to algae blooms, dead zones, and other impairments in large estuaries like the Chesapeake Bay.

In addition, EPA continues to allow AFOs to use the Air Consent Agreement and EEM development process to keep citizens from enforcing statutes such as EPCRA⁵⁵ against AFOs.⁵⁶ Although EPA can prevent the Agreement from being used as an affirmative defense in EPCRA citizen enforcement suits, the agency has opted not to do so. As a result, EPA is allowing this Agreement to stand in the way of effective enforcement of this statute against AFO polluters, regardless of the amount or persistence of that pollution.

IV. EPA'S MONITORING STUDY WAS FLAWED, UNDERMINING EPA'S ABILITY TO DEVELOP VALID EEMs.

A. EPA Limited the Size and Geographic Scope of its Study, Despite the Entry of Nearly 14,000 AFOs into the Agreement.

In announcing the Air Consent Agreement and NAEMS Protocol, EPA claimed that “[m]onitoring will occur at facilities across the country to get a representative sample of the facility types,” and the NAEMS “protocol will provide sufficient data to get a valid sample that is representative of the vast majority of the participating AFOs.”⁵⁷ EPA intended to use the results of this monitoring study “to generate scientifically credible data to provide for the characterization of emissions from all major types of AFOs in all geographic areas where they are located.”⁵⁸ However, the study fell far short of achieving this goal for a variety of reasons,

⁵⁵ In 2019, EPA finalized a rule exempting AFOs from their reporting obligations under EPCRA section 304. *See* Amendment to Emergency Release Notification Regulations on Reporting Exemption for Air Emissions From Animal Waste at Farms; Emergency Planning and Community Right-to-Know Act, 84 Fed. Reg. 27,533 (June 13, 2019). That rulemaking has been challenged in federal court by a coalition of environmental and environmental justice groups, including many of the signatories here. *Rural Empowerment Association for Community Help, v. EPA*, Case No. 18-02260-TJK (D.D.C. 2019). Following the D.C. Circuit’s decision in *Waterkeeper Alliance v. EPA*, 853 F.3d 527, 537–38 (D.C. Cir. 2017), we expect the court to overturn EPA’s 2019 rule, and therefore believe that AFOs may use the Air Consent Agreement to hamper citizen suit enforcement of EPCRA.

⁵⁶ *See, e.g., Humane Soc’y of the United States v. Hanor Company of Wisconsin, LLC*, 289 F. Supp. 3d 692 (E.D. N.C. 2018).

⁵⁷ 2005 Notice at 4960; *see also id.* at 4968 (Attach. B to App. 1: NAEMS Protocol).

⁵⁸ *Id.* at 4960.

including the industry's role in selecting sites, the small number of selected sites, and EPA's flawed site selection methodology.⁵⁹

From the onset, the design and implementation of the study was limited because industry exerted significant control on the pool of potential study sites. Although "EPA acknowledged that emissions data should be collected for every type of animal feeding operation and practice," EPA officials concluded that the industry should be responsible for site selection,⁶⁰ deferring to industry yet again.

Records obtained by the Environmental Integrity Project under the Freedom of Information Act confirm that AFO owners and operators played a major role in selecting the sites in NAEMS.⁶¹ For example, Perdue broiler facilities did not participate in the Air Consent Agreement. Perhaps as a direct consequence, NAEMS did not include a single broiler site in the Mid-Atlantic, despite incredible industry concentration in the region.⁶² Further, Tyson Foods, one of the largest meat producers in the United States, directly sponsored the data collection at its broiler sites in Kentucky.⁶³

Moreover, despite almost 14,000 AFOs receiving enforcement protection under the Agreement, the NAEMS study itself only included 27 sites at 20 AFOs in 10 states.⁶⁴ The small

⁵⁹ See GAO, CONCENTRATED ANIMAL FEEDING OPERATIONS: EPA NEEDS MORE INFORMATION & A CLEARLY DEFINED STRATEGY TO PROTECT AIR & WATER QUALITY FROM POLLUTANTS OF CONCERN 37–39 (2008) <https://www.gao.gov/assets/gao-08-944.pdf> ("[T]he National Air Emissions Monitoring Study may not provide the data that EPA needs to develop comprehensive protocols for quantifying air emissions from [AFOs] for a variety of reasons.") [hereinafter 2008 GAO Report]; see also *id.* at 7 ("[A]s currently structured, the study may not provide the scientific and statistically valid data it was intended to provide and that EPA needs to develop air emissions protocols.").

⁶⁰ *Id.* at 38–39 ("According to EPA officials, the industry identified those monitoring sites that they believed best represented the type of operations and manure management practices that are in their various animal sectors.").

⁶¹ Letter from Tarah Heinzen, Env't Integrity Project, to EPA Docket Center, (June 11, 2012) (citing email from Heber to Nizich (Aug. 9, 2006) (stating that "the National Milk Producers Federation approved these site selections for the NAEMS"))).

⁶² See PEW, *Big Chicken: Pollution & Industrial Poultry Production in America* (July 26, 2011), <https://www.pewtrusts.org/en/research-and-analysis/reports/2011/07/26/big-chicken-pollution-and-industrial-poultry-production-in-america>; see also EPA, *2012 Monitored AFOs*, <https://archive.epa.gov/airquality/afo2012/web/html/index.html>.

⁶³ IOWA STATE UNIV. & UNIV. OF KENTUCKY, FINAL PROJECT REPORT ON SOUTHEASTERN BROILER GASEOUS & PARTICULATE MATTER EMISSIONS MONITORING (Dec. 2009) (describing emissions monitoring results of two Tyson broiler production houses located on two separate farm sites in western Kentucky), <https://archive.epa.gov/airquality/afo2012/web/pdf/ky1bsummaryreport.pdf>.

⁶⁴ See 2017 OIG REPORT at 7; see also *2012 Monitored AFOs*, <https://archive.epa.gov/airquality/afo2012/web/html/index.html>.

number of sites selected led the Government Accountability Office (GAO) to raise concerns in 2008, before the completion of NAEMS, that “the study did not include a sufficient number of monitoring sites to establish a statistically valid sample.”⁶⁵ As explained in GAO’s report, “[w]ithout such a sample . . . EPA will not be able to accurately estimate emissions for all types of operations.”⁶⁶

EPA also failed to select geographically representative sites. When designing NAEMS, EPA purportedly intended to study a statistically significant number of representative sites and generate “scientifically credible data to provide for the characterization of emissions from all major types of AFOs in all geographic areas where they are located.”⁶⁷ Yet the study design fell far short of anything capable of achieving this. Primary Investigators for the sites were selected before the NAEMS sites themselves, limiting the role of representativeness in the site selection process since investigators needed to be proximately located to NAEMS sites.⁶⁸ As GAO observed:

[T]he monitoring study does not include the 16 combinations of animal types and geographic regional pairings recommended by EPA’s expert panel. The panel recommended this approach so that the study sample would be representative of the vast majority of participating animal feeding operations, accounting for differences in climatic conditions, manure-handling methods, and density of operations. However, EPA approved only 12 of the 16 combinations recommended by the expert panel, excluding southeastern broiler, eastern layer, midwestern turkey, and southern dairy operations.⁶⁹

Atmospheric conditions, facility age and design, feed, and other variables may significantly impact air emissions.⁷⁰ Therefore, a statistically significant study should include multiple sites representing as many different sets of climate and geographic conditions as possible. This was simply not possible with such a small number of sites.

⁶⁵ 2008 GAO Report at 7, 38–39.

⁶⁶ *Id.*

⁶⁷ 2005 Notice at 4960; *see also* 2008 GAO Report at 36.

⁶⁸ Letter from Tarah Heinzen, Env’t Integrity Project, to EPA Docket Center, (June 11, 2012) (citing Heber, “Site Selection Procedure” (Jun. 10, 2005)).

⁶⁹ 2008 GAO Report at 37–38.

⁷⁰ *See* 2005 Notice at 4977 (listing several “influences on emissions” provided by producer, rather than collected by study).

B. EPA Failed to Generate Adequate Data to Develop EEMs.

In response to the initial announcement of the Agreement and NAEMS, experts and community groups raised concerns about the protocol, even before EPA had selected sites or initiated monitoring.⁷¹ While the study was ongoing, GAO again warned EPA that NAEMS may not “provide data of sufficient quantity and quality” to establish the planned EEMs.⁷² But EPA ignored those concerns. Consequently, EPA’s NAEMS study did not generate the data needed to develop comprehensive protocols for quantifying air emissions from AFOs. In 2013, years after EPA concluded the monitoring study, EPA’s Scientific Advisory Board (SAB) confirmed the concerns raised by GAO in 2008 regarding the small number of sites in the study and the quality of the data.⁷³

In reviewing EPA’s draft EEMs, which the SAB ultimately found unsuitable for national use, SAB panel members noted that the California broiler data sets for Total Suspended Particles and PM_{2.5} had less than 10 percent completeness, while that entire site had only 20 percent completeness during the fall.⁷⁴ EPA also had problems receiving data from contractors and excluded data due to changes in monitoring method. Short monitoring periods at certain sites in combination with missing or invalidated data has resulted in a much smaller than anticipated dataset from which to develop EEMs.

Moreover, EPA’s unnecessarily restrictive data completeness requirements further limited the availability of usable data. The NAEMS protocol required 75 percent of any hour’s data to be valid to accept the hour’s data, and 75 percent of any day’s hours to accept the day’s data.⁷⁵ The 2013 SAB Report noted the study’s low data completeness rates, questioning EPA’s

⁷¹ Many of the signatories submitted comments regarding EPA’s flawed 2005 Air Consent Agreement and NAEMS Protocol. *See, e.g.*, Comments by B. Newell et al., Center on Race, Poverty & the Environment et al., EPA-HQ-OAR-2004-0237-0476 (Mar. 1, 2005).

⁷² 2008 GAO Report at 7.

⁷³ EPA SCI. ADVISORY BD., REVIEW OF EEMs FOR BROILER AFOs AND FOR LAGOONS & BASINS AT SWINE & DAIRY AFOs 2 (Apr. 19, 2013), available at [https://yosemite.epa.gov/sab%5CSABPRODUCT.NSF/08A7FD5F8BD5D2FE85257B52004234FE/\\$File/EPA-SAB-13-003-unsigned%20.pdf](https://yosemite.epa.gov/sab%5CSABPRODUCT.NSF/08A7FD5F8BD5D2FE85257B52004234FE/$File/EPA-SAB-13-003-unsigned%20.pdf), [hereinafter 2013 SAB REPORT] (“In summary, the SAB concludes that the EPA has developed statistical models based on combined data sets and predictor variables which have limited the ability of the models to predict emissions beyond the small number of farms in the dataset.”).

⁷⁴ *Id.*

⁷⁵ *Id.*

decision to require a “too stringent and unnecessary” 75 percent completeness despite the study’s frequent failure to meet that goal.⁷⁶

Though EPA has acknowledged the problems with its completeness criteria,⁷⁷ it has failed to rectify the issue. When issuing the August 2020 draft swine EEMs, EPA conceded that completeness requirements for its open area/source data should be lowered, but only to 52 percent.⁷⁸ However, EPA then released draft poultry EEMs in August 2021 that retained the 75 percent completeness requirement for all data sources.⁷⁹ The completeness criteria for swine barn emission data have also remained unchanged, and EPA maintains that “the potential need to revise this value for barn source emissions will be assessed at a later date, if appropriate.”⁸⁰ Yet no such assessment has taken place.

The more EPA evaluates the data, the more problems it uncovers. For instance, in the draft swine EEMs released in August 2020, EPA discovered new issues with ventilation and moisture interference, resulting in the invalidation and removal of numerous ammonia, hydrogen sulfide, and particulate matter measurements from the dataset.⁸¹ The revision included the removal of all open source ammonia emissions data from one of only four monitoring sites.⁸² This continued reduction of the dataset, which is already too small to provide a complete representative sample, only further compromises EPA’s ability to establish accurate EEMs.

⁷⁶ *Id.* at 26.

⁷⁷ See EPA, QUALITY ASSURANCE PROJECT PLAN: DEVELOPMENT OF EEMs FOR AIR EMISSIONS FROM AFOS 15 (Mar. 13, 2018) [hereinafter 2018 QAPP], available at https://www.epa.gov/sites/default/files/2018-03/documents/final_eem_qapp_v0.0_for_web_0.pdf.

⁷⁸ *Id.* EPA, DEVELOPMENT OF EEMs FOR SWINE BARNs & LAGOONS, DRAFT 3-1 to 3-4. (Aug. 2020), [hereinafter 2020 Draft EEMs for Swine Barns & Lagoons] available at https://www.epa.gov/sites/default/files/2020-08/documents/development_of_emissions_estimating_methodologies_for_swine_barns_and_lagoons.pdf.

⁷⁹ EPA, DEVELOPMENT OF EEMs FOR BROILER OPERATIONS, DRAFT 5-3 to 5-4 (Aug. 2021) [hereinafter 2021 Draft EEMs for Broilers], available at <https://www.epa.gov/sites/default/files/2016-06/documents/afobroilereemreport2012draft.pdf>; DEVELOPMENT OF EEMs FOR EGG-LAYING HOUSES & MANURE SHEDS, DRAFT 2-2 (Aug. 2021) [hereinafter 2021 Draft EEMs for Poultry Houses & Manure Sheds], https://www.epa.gov/system/files/documents/2021-08/development_of_emissions_estimating_methodologies_for_egg_layer_houses_and_manure_sheds.pdf.

⁸⁰ 2018 QAPP at 15.

⁸¹ 2020 Draft EEMs for Swine Barns & Lagoons at 3-2 and 4-2.

⁸² *Id.* at 3-16 and 3-17.

C. EPA Failed to Finalize EEMs Following the Completion of NAEMS.

Following the completion of NAEMS in 2010, three years later than expected, the initial terms of the Air Consent Agreement provided that EPA had 18 months to evaluate the data collected through the study and publish emission unit-specific estimating methodologies.⁸³ In 2012, EPA published draft EEMs for 8 of the 36 emission sources and pollutants described in the Agreement.⁸⁴ Those draft EEMs, which covered broiler AFOs and lagoons and basins at swine and dairy AFOs, were noticed for public comment and submitted to the agency's Scientific Advisory Board (SAB) for review and feedback.⁸⁵

The response to the draft EEMs from both the public and EPA's own SAB was highly critical and called into question NAEMS design and methodology, the data generated, EPA's statistical approach, its treatment of the available data, and the agency's ability to use the draft to accurately estimate air pollution from facilities not otherwise included in the study itself.⁸⁶ The SAB lambasted EPA for its approach to the NAEMS process and the data collected, concluding—among other things—that the draft EEMs developed by EPA should not be applied on a national scale because “EPA has developed statistical models based on combined data sets and predictor variables which have limited the ability of the models to predict emissions beyond the small number of farms in the dataset.”⁸⁷

The SAB recommended that “EPA not apply the current versions of the statistical and modeling tools for estimating emissions beyond the farms in EPA's data set,” and provided “recommendations for how the agency may expand the data set and the applicability of the

⁸³ 2005 Air Consent Agreement at ¶ 32 (“EPA will publish [EEMs] within 18 months of the conclusion of the monitoring period . . .”).

⁸⁴ See 2017 OIG REPORT at 11; EPA, DEVELOPMENT OF EEMs FOR LAGOONS & BASINS AT SWINE & DAIRY AFOs, DRAFT (Feb. 2012) [hereinafter 2012 Draft EEMs for Swine & Dairy AFOs], available at [https://yosemite.epa.gov/sab/SABPRODUCT.NSF/81e39f4c09954fcb85256ead006be86c/AE6639DD6B79360E852579A4004E5529/\\$File/PDF+for+Development+of+Emissions+Estimating+Methodologies+for+Lagoons+and+Basins+at+Swine+and+Dairy+Animal+Feeding+Operation.pdf](https://yosemite.epa.gov/sab/SABPRODUCT.NSF/81e39f4c09954fcb85256ead006be86c/AE6639DD6B79360E852579A4004E5529/$File/PDF+for+Development+of+Emissions+Estimating+Methodologies+for+Lagoons+and+Basins+at+Swine+and+Dairy+Animal+Feeding+Operation.pdf); EPA, DEVELOPMENT OF EEMs FOR BROILER OPERATIONS, DRAFT (Feb. 2012) [hereinafter 2012 Draft EEMs for Broilers], available at <https://www.epa.gov/sites/default/files/2016-06/documents/afobroilereemreport2012draft.pdf>.

⁸⁵ Notice of Availability: Draft Documents Related to the Development of EEMs for Broiler AFOs and Lagoons & Basins for Swine & Dairy AFOs, 77 Fed. Reg. 14716 (Mar. 13, 2012); see also Comments Submitted in Response to Notice of Availability, <https://www.regulations.gov/document/EPA-HQ-OAR-2010-0960-0015/comment>.

⁸⁶ Many of the signatories submitted comments regarding EPA's flawed 2012 Draft EEMs. See, e.g., Comments Submitted by R. Lawrence, Center for a Livable Future, [EPA-HQ-OAR-2010-0960-0037](https://www.regulations.gov/document/EPA-HQ-OAR-2010-0960-0037) (Jun. 11, 2012); T. Heinzen, Environmental Integrity Project et al., [EPA-HQ-OAR-2010-0960-0026](https://www.regulations.gov/document/EPA-HQ-OAR-2010-0960-0026) (Jun. 11, 2012).

⁸⁷ 2013 SAB REPORT at 2.

models.”⁸⁸ For example, SAB recommended that EPA expand its dataset by collecting data from monitoring efforts outside of the NAEMS, and using NAEMS data that were initially excluded due to EPA’s data completeness criteria.⁸⁹

The SAB also advocated for a process-based modeling approach to EEM development, noting that “[p]rocess-based models would be more likely to be successful in representing a broad range of conditions than the current models because [they] represent the chemical, biological and physical processes and constraints associated with emissions.”⁹⁰

In short, the SAB told EPA to go back to the drawing board and revise its process for developing EEMs based on the data gathered through NAEMS. EPA has responded to some of SAB’s concerns, but not all. As a result, EPA has yet to finalize any EEMs or bring any participating parties into compliance with the CAA, CERCLA, and EPCRA. Nor has EPA revoked the safe harbor provision established in the Air Consent Agreement.

D. EPA Has Failed to Consider Available Information from Peer-Reviewed Studies.

Given the clear flaws in NAEMS design and implementation, which yielded non-representative and incomplete data, it was incumbent upon EPA to expand the scope of AFO emission data it relied on to ensure accurate EEMs. However, the draft EEMs continue to rely exclusively on the limited NAEMS data, rather than incorporating findings from numerous peer-reviewed AFO emissions studies. The small number of sites in each livestock sector and the data gaps and technical problems experienced during NAEMS heighten the importance of outside research. EPA’s decision to limit available information will result in inadequate EEMs.

From 2007 to 2010, EPA collected emissions data at 27 sites across 20 AFOs. The data were originally published in 2011 and finalized in 2012. EPA relied exclusively on these data to develop the 2012 draft EEMs for broilers and lagoons/basins at swine and dairy AFOs, as well as the 2020 and 2021 draft EEMs for swine and poultry AFOs. However, the Air Consent

⁸⁸ *Id.*

⁸⁹ *Id.* at 1.

⁹⁰ *Id.* at 2.

Agreement requires that EPA consider *all* relevant information when developing EEMs, not just the data collected at a small sample of AFOs during the monitoring study:

The term “Emissions-Estimating Methodologies” means those procedures that will be developed by EPA, based on data from the national air emissions monitoring study *and any other relevant data and information*, to estimate daily and total annual emissions from individual Emission Units and/or Sources.⁹¹

Although the Agreement clearly provides that EPA must consider “relevant data and information” *other* than the monitoring data, EPA has elected to interpret this term so narrowly as to exclude all information not derived from NAEMS. In 2011, EPA asked the public to submit information relating to the agency’s development of draft EEMs for broiler confinement facilities and lagoons/basins at swine and dairy AFOs.⁹² Despite receiving several relevant, peer-reviewed emissions studies in response to the call for information, EPA ultimately concluded that none of the studies were relevant to the EPA’s draft EEMs.⁹³

In an attempt to justify EPA’s narrow reading of the Air Consent Agreement and exclusion of outside data, the 2012 draft EEMs for Swine and Dairy AFOs state that “none of the articles previously obtained by the EPA to support emissions factor development used remote sensing techniques to measure lagoon emissions.”⁹⁴ This explanation is inadequate. EPA did not explain why it preferred remote sensing techniques over other techniques. Nor did it explain why the techniques used in the outside studies were incompatible with the remote sensing data. Similarly, in the 2012 draft EEMs for Broilers, EPA disregarded peer-reviewed poultry emissions studies solely because the researchers used different methods.⁹⁵

Since the publication of the 2012 draft EEMs, EPA has reaffirmed its commitment to relying exclusively on NAEMS data. In 2018, after nearly a decade of delay and inaction, EPA decided to put off any investigation into the “potential need for additional non-NAEMS data”

⁹¹ 2005 Air Consent Agreement at ¶10 (emphasis added); *see also* 2005 Notice at 4960 (“EPA will use the data generated from the monitoring *and all other available, relevant data* to develop [EEMs]”) (emphasis added).

⁹² *See* Call for Information Related to the Development of EEMs for AFOs, 76 Fed. Reg. 3060 (Jan. 19, 2011); *see also* Comments Submitted in Response to Call for Information, <https://www.regulations.gov/document/EPA-HQ-OAR-2010-0960-0001/comment>.

⁹³ 2012 Draft EEMs for Swine & Dairy AFOs Table 3-3, 2012 Draft EEMs for Broilers Table 3-14 (Feb. 2012).

⁹⁴ 2012 Draft EEMs for Swine & Dairy AFOs at 3-14.

⁹⁵ 2012 Draft EEMs for Broilers at 4-13 to 4-23.

until a “later stage” in the project “if appropriate.”⁹⁶ The 2020 draft EEMs for Swine AFOs used peer-reviewed studies only to inform the selection of possible model parameters.⁹⁷ But the Air Consent Agreement requires EPA to use available data to *develop* the EEMs.⁹⁸

EPA’s continued exclusion of clearly relevant data from the EEM development process violates the Air Consent Agreement and confirms that continuing the already protracted EEM development process would be futile. Moreover, EPA cannot develop adequate EEMs based exclusively on the outdated and incomplete NAEMS monitoring data collected from 2007 to 2010 because the industry has changed considerably since the monitoring study concluded over a decade ago.⁹⁹ Furthermore, new studies regarding air emissions from AFOs have been published in recent years, revealing important insights about the emissions generated from various AFO sources and their impacts on local communities.¹⁰⁰ Without the addition of recent outside studies, any EEMs developed by EPA will fail to accurately estimate emissions from AFOs.

E. The 2017 OIG Report Urged EPA to Either Finalize the EEMs or End the Agreement.

In 2017, six years after all EEMs were supposed to be finalized, OIG released a report on EPA’s actions to evaluate air emissions from AFOs, focusing on the Air Consent Agreement and NAEMS.¹⁰¹ As with the SAB, OIG was highly critical of EPA’s extreme delay in developing EEMs following the completion of NAEMS, noting that “competing priorities [have] resulted in the EPA’s Office of Air and Radiation putting the EEM effort largely on hold” to the extent that “the EPA stopped funding the contract for NAEMS analysis.”¹⁰² OIG also expressed concern

⁹⁶ 2018 QAPP at 14.

⁹⁷ 2020 Draft EEMs for Swine Barns & Lagoons at 13-1 to 13-2.

⁹⁸ 2005 Notice at 4960.

⁹⁹ Over the past nine years alone, significant changes to the hog, dairy, broiler, and egg-laying industries can be observed in particular state CAFO expansion trends. For instance, the number of CAFOs operating in Iowa, a state dominated by the hog industry, has increased by 136 percent since 2011. There are 43 percent more CAFOs operating in Wisconsin, where the dairy industry is most prevalent, than what existed in 2011. In Delaware, a broiler-focused state, the CAFO industry has grown by 838 percent. And Ohio, a state dominated by egg-laying operations, has seen a 33 percent increase. *See* EPA, NPDES CAFO Rule Implementation Status – National Summary, Endyear 2011 (Dec. 31, 2011), https://www.epa.gov/sites/default/files/2015-08/documents/npdes_cafo_rule_implementation_status_-_national_summary_endyear_2011_0.pdf; EPA, NPDES CAFO Rule Implementation Status – National Summary, Endyear 2020 (May 11, 2021), https://www.epa.gov/sites/default/files/2021-05/documents/cafo_status_report_2020.pdf.

¹⁰⁰ *See* discussion, *supra* Part I.

¹⁰¹ 2017 OIG REPORT at 1.

¹⁰² *Id.* at 10.

about the lack of EPA agricultural air expertise and committed resources, noting that the agency “did not have staff with combined expertise in agricultural emissions, air quality[,] and statistical analysis.”¹⁰³

Although EPA completed NAEMS in early 2010, EPA has yet to finalize the EEMs to make CAA and CERCLA/EPCRA compliance determinations under the terms of the Air Consent Agreement. OIG expressed concern that although the civil enforcement protections were initially planned to expire in 2012, all 14,000 AFOs that participated in the Agreement continue to enjoy civil enforcement protections, and EPA has put several important actions on hold pending development of the EEMs.¹⁰⁴ In short, as OIG concluded, “EPA’s ability to characterize and address AFO air emissions is unchanged since its 2005 Agreement with the AFO industry intended to produce reliable emissions estimation methods.”¹⁰⁵

To continue moving the EEM process forward, OIG recommended that EPA conduct adequate systematic planning—something that the agency should have done *before* conducting NAEMS or preparing the draft EEMs.¹⁰⁶ “Based on the results of systematic planning,” EPA should “determine and document the decision as to whether the EPA is able to develop scientifically and statistically sound emission estimating methodologies for each originally planned emission source and pollutant combination.”¹⁰⁷ After conducting those reviews, OIG recommended that EPA should “[f]or the emission source and pollutant combinations for which the Office of Air and Radiation determines it can develop scientifically and statistically sound emission estimating methodologies, establish public milestone dates for issuing each draft emission estimating methodology” and “[f]or any emission source and pollutant combinations for which the Office of Air and Radiation determines it cannot develop emission estimating methodologies, notify Air Consent Agreement participants of this determination, and that the release and covenant not to sue for those emission sources and pollutant types will expire in accordance with paragraph 38 of the 2005 Air [Consent] Agreement.”¹⁰⁸

¹⁰³ *Id.* at 16.

¹⁰⁴ *Id.*

¹⁰⁵ *Id.* at 18.

¹⁰⁶ *Id.* at 22.

¹⁰⁷ *Id.* at 23.

¹⁰⁸ *Id.*

Since the OIG report was published in 2017, EPA has continued to drag its feet regarding EEM development, despite the clear course correcting path that OIG laid out for the Agency. While EPA maintains that it has timely implemented all OIG recommended actions,¹⁰⁹ in reality, the only action that EPA has completed in good faith is the very first on the list—publishing a planning document to guide future EEMs development.¹¹⁰ As for the remaining four OIG recommendations, EPA has either failed to comply altogether or implemented them in such a half-hearted way so as to undermine their whole purpose, namely, to prevent any further delay.

According to OIG’s corrective action timeline, based on the results of EPA’s systematic planning, EPA was to “document the decision” as to which EEMs could be developed and which could not no later than June 30, 2018.¹¹¹ Yet when the June deadline came, all EPA had decided was that, “for now,”¹¹² it would move forward with developing EEMs for all pollutants and all source categories, even while holding out the possibility that “emission source categories might be revised during subsequent stages of EEM development” upon further investigation.¹¹³ In other words, instead of making any real effort to narrow the scope of feasible EEMs, as OIG intended, the Agency simply made a placeholder determination to proceed as originally planned to check an item off its OIG to-do list. Conveniently, this also allowed EPA to hold off on implementing another OIG action—ending enforcement amnesty for affected Air Consent Agreement participants—since only a finalized decision to abandon certain EEMs could trigger this requirement.¹¹⁴ However, this did not stop the Office of Enforcement and Compliance Assurance from certifying that this action, which has yet to occur, was “complete.”¹¹⁵

Moreover, because EPA opted to move forward with the development of all originally planned EEMs, EPA was required to “set public milestone dates” for issuance of all draft EEMs

¹⁰⁹ See Memorandum from W. Wehrum, Assistant Administrator, OAR-18-000-9472 - *Certification Memo for Office of Inspector General (OIG) Report No. 17-P-0396* (July 30, 2018) ED_004549_00036447-00001 (certifying completion of OAR corrective actions); M. Badalamente, *Certification of Performance Audit* (Apr. 2, 2019) ED_004549_00036462-00001 (certifying completion of OECA corrective action) [hereinafter OECA Certification Memo].

¹¹⁰ See 2018 QAPP at 14.

¹¹¹ 2017 OIG REPORT at 23.

¹¹² Email from Tim Sullivan to Lauren Kabler Re: 2017 OIG Report, ED_005459-00036448-00003 (Sep. 20, 2018).

¹¹³ 2018 QAPP at 16.

¹¹⁴ 2017 OIG REPORT at 23.

¹¹⁵ OECA Certification Memo at 1-2 (paradoxically stating OECA’s action is “complete” because OECA stands ready to implement it “within 60 days of OAR finalizing its determination”).

and to keep the public informed of the status of EEM development.¹¹⁶ While EPA did set publicly available issuance dates (yet another box checked), it has made no effort to meet these self-imposed deadlines. In fact, every time a deadline nears, the Agency updates the schedule to give itself more time. In the agency's revised schedule for developing EEMs, EPA committed to issuing draft EEMs beginning in September 2019 and ending no later than November 2020.¹¹⁷ However, after revising the schedule more than five times in just two years, with the most recent schedule slide occurring just this past August, EPA now lists the date for issuing all draft EEMs as May 2022.¹¹⁸ While OIG required EPA to "set public milestone dates," it surely did not intend for EPA to push back the dates whenever the agency failed to meet an upcoming deadline. The purpose of the updated schedule was to prevent continued delay and uncertainty regarding EPA's development process. As of the date of this letter, EPA continues to delay the EEMs and fall behind its own updated timeline.

V. EPA SHOULD TERMINATE THE AIR CONSENT AGREEMENT BECAUSE EPA HAS FAILED TO PRODUCE VALID EEMs.

A. EPA Should Abandon the Fundamentally Flawed NAEMS and EEMs Development Process in Favor of Existing Models.

As discussed above, EPA cannot rely on the NAEMS data collected at 20 AFOs from because these data are not representative of current emissions from AFOs across the country. At this stage in the EEM development process, EPA cannot correct the flaws in NAEMS and EEM design or implementation. And although EPA has acknowledged the issues limiting the applicability of the data and affecting its current efforts to establish legitimate EEMs, it has failed to sufficiently address those issues. Moreover, EPA already has process-based models and emissions factors that it can use for the purposes of estimating emissions from AFOs and making compliance determinations. Where such methods are available, EPA should immediately adopt the methods as the default EEMs.

¹¹⁶ 2017 OIG REPORT at 23.

¹¹⁷ See Archived EPA Webpage: *National Air Emissions Monitoring Study* (Jul. 3, 2018), <http://web.archive.org/web/20180703144202/https://www.epa.gov/afos-air/national-air-emissions-monitoring-study>.

¹¹⁸ See EPA, *National Air Emissions Monitoring Study* (last visited 10/22/2021) <https://www.epa.gov/afos-air/national-air-emissions-monitoring-study>.

In 2013, nearly a decade ago, EPA’s Science Advisory Board recommended that the EPA “consider developing EEMs at a variety of levels of complexity to provide options for producers with different levels of data availability.”¹¹⁹

Models of varying complexity should be developed based on the level of input provided by a given producer (e.g., one model may be developed considering the composition of a feed ration, while a less complex model using default industry values could be used if a producer does not wish to or cannot disclose information regarding feed rations).¹²⁰

This SAB recommendation is critical. As discussed above, data limitations often make the implementation of EEMs impractical or impossible. To implement the 2020 and 2021 draft EEMs for swine and poultry AFOs, AFO operators would essentially have to run multiple statistical models for each emissions source, each day of the year, using actual daily data points, like animal inventory, average animal weights, ambient air temperature, and wind speed, to estimate annual emissions.¹²¹ This is problematic in at least two ways. First, it would be difficult for potential sources and regulators to acquire and process the large amount of data required to generate annual emissions estimate. Second, since the draft EEMs require actual input data, they cannot readily be used to estimate future emissions from proposed (or existing) sources.

The current forms of the EEMs are thus inconsistent with the CAA, which asks proposed and existing sources to provide emissions estimates in the form of annual emission potential (an upper-bound estimate that does not require daily model iterations).¹²² EPA therefore needs EEMs that utilize default assumptions. The SAB strongly recommended this approach, but EPA unfortunately continues to ignore it.¹²³

EPA has also recommended this simplified approach in other contexts. For example, in 2019, EPA published guidance for estimating animal waste emissions for purposes of complying

¹¹⁹ 2013 SAB REPORT at 2, 4.

¹²⁰ *Id.* at 14

¹²¹ *Id.*

¹²² If implemented, the 2020 Draft EEMs for Swine AFOs would not produce Potential to Emit (PTE) estimates. These estimates provide critical information in determining how the CAA applies at a given facility, and if a facility is a “major source.” The draft EEMs instead prescribe the use of actual animal inventories and will not determine if facilities are “major sources” as required.

¹²³ 2013 SAB REPORT at 14 (“The EPA should create a modeling approach that can be defined using default parameters that can be simply attained and that would reflect the heterogeneity of AFOs.”).

with CERCLA and EPCRA.¹²⁴ Some of the methods recommended in this guidance were simple emissions factors (e.g., pounds per animal per day).¹²⁵ Other recommended methods were in the form of worksheets that used a combination of site-specific information (e.g., animal housing type and maximum permitted capacity) and default parameters (e.g., animal-specific nitrogen excretion rates and ammonia loss factors). The worksheets are notable for two reasons. First, the worksheets generate “peak” pollutant emissions, based on maximum/permitted animal capacity, which is consistent with CAA “potential to emit” requirements. Second, the worksheets are easy to implement with limited data because they incorporate default parameters.

In sum, EPA already estimates emissions, and recommends that others do so, using methods that are consistent with the CAA and SAB guidance and are easy to implement. Yet it continues to insist on developing flawed EEMs that fail all of these criteria. This is flagrantly arbitrary and unreasonable, and only serves one purpose—to continue to protect a large source of air pollution from regulation.

B. EPA Overstates the Difficulty of Developing Process-Based Models, Which the Agency Is Already Using in Other Contexts.

Since the beginning of the EEM development process, the scientific community has recommended that EPA pursue a process-based approach. In 2003, the National Academies of Sciences (NAS) concluded that the “use of process-based modeling will help provide scientifically sound estimates of air emissions from AFOs for use in regulatory and management programs.”¹²⁶ Ten years later, in 2013, EPA’s Science Advisory Board made the same recommendation.¹²⁷ Today, nearly two decades after the NAS first recommended a process-based approach, and despite the fact that EPA is already using process-based models in other contexts, EPA maintains that it cannot yet develop process-based EEMs.

¹²⁴ EPA, *CERCLA & EPCRA Reporting Requirements for Air Releases of Hazardous Substances from Animal Waste at Farms*, EPA (last visited Aug. 27, 2021), <https://www.epa.gov/epcra/cercla-and-epcra-reporting-requirements-air-releases-hazardous-substances-animal-waste-farms>.

¹²⁵ See, e.g., EPA, *Calculation Worksheet: Ammonia and Hydrogen Sulfide from Dairy Operations* (2009) available at https://www.michigan.gov/documents/deq/deq-ess-cafo-worksheet-dairyemissions_266406_7.pdf.

¹²⁶ NAT’L RSCH. COUNCIL, *AIR EMISSIONS FOR ANIMAL FEEDING OPERATIONS: CURRENT KNOWLEDGE, FUTURE NEEDS*, 103 (2003).

¹²⁷ 2013 SAB REPORT at 10-13.

EPA concedes that its statistical approach is flawed, and now describes the statistical approach as an “interim” solution until more reliable process-based models can be developed.¹²⁸ EPA suggests that this approach “follow[s] the expert recommendations and [is] consistent with the Air [Consent] Agreement.”¹²⁹ This is simply not true—EPA is *not* following the Air Consent Agreement or the SAB recommendations, both of which emphasize the need for data from outside of NAEMS. The SAB reminded EPA that process-based models would require the Agency to consider outside information:

Developing a rigorous process-based EEM will require extensive data beyond the range of values, conditions, and types of farms available in the NAEMS data set. To address this data gap the EPA should consider using data collected through mechanisms outside the consent agreement, including data published in peer-reviewed literature, raw data from key studies, data that support key literature, and additional data that the EPA has collected since receiving data in response to the Call for Information on AFOs and emissions.¹³⁰

EPA has not done this. The delay in developing process-based EEMs is almost entirely due to EPA’s failure to collect or consider the necessary data.

More broadly, it is important to consider EPA’s track record. EPA’s chosen course of action, developing interim statistical models, has already taken more than 16 years and is *still* not complete. If this is EPA’s *interim* solution, how many more decades will it take before EPA can meet its “long term” goals of developing process-based EEMs? At this rate, the industry is changing faster than the EEM development process, and whatever EPA develops will immediately be outdated. Given EPA’s history of protracted delay, it makes no sense to continue developing flawed “interim” EEMs while EPA contemplates a plan for someday, maybe developing legitimate EEMs. The problem of air pollution from AFOs deserves actual solutions, not more wheel-spinning.

Developing process-based models will not require more time than completing its flawed statistical models. EPA is already using process-based models (and other models) to estimate AFO emissions and has acknowledged that process-based models accurately predict NAEMS

¹²⁸ See, e.g., 2020 Draft EEMs for Swine Barns & Lagoons at 1-8 to 1-9.

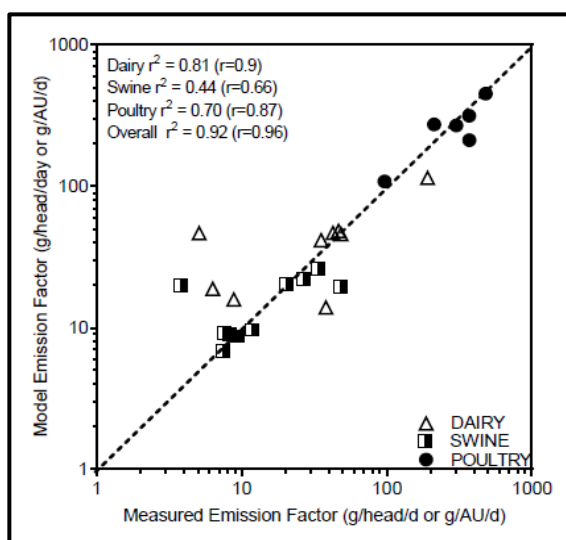
¹²⁹ *Id.* at 1-8.

¹³⁰ 2013 SAB REPORT at 14.

emissions based on NAEMS input data. Ironically, although EPA claims to be interested in any “suitable model[s] available in literature to use,”¹³¹ it ignores the high-quality process-based model being used *by EPA* in its National Emissions Inventory (NEI).

As part of its NEI, the Agency estimates ammonia emissions from dairy, beef, poultry, and swine operations using a process-based model developed by Carnegie-Mellon University (CMU).¹³² This model has been evaluated against NAEMS monitoring data, and one author observed that “the process-based [Farm Emissions Models] perform reasonably well in predicting the magnitude of ammonia emissions, their seasonal cycle, and farm-to-farm variability.”¹³³ It is particularly noteworthy that the CMU model “was able to differentiate between farms and practice,” as shown in the figure below.¹³⁴

Figure 1: Comparison of Process-Based Model Predictions and NAEMS Monitoring Data



¹³¹ 2018 QAPP at 19.

¹³² EPA, 2017 NATIONAL EMISSIONS INVENTORY: JANUARY 2021 UPDATED RELEASE, TECHNICAL SUPPORT DOCUMENT 4-61 (2021); A. McQuilling & P. Adams, *Semi-Empirical Process-Based Models For Ammonia Emissions From Beef, Swine, & Poultry Operations In The United States*, 120 *ATMOS. ENVTL.* 127 (Nov. 2015).

¹³³ A. McQuilling, *Ammonia Emissions from Livestock in the United States: From Farm-Level Models to a New National Inventory*, at 51 (Jan. 2, 2016) (Ph.D dissertation Carnegie Mellon University), https://kilthub.cmu.edu/articles/thesis/Ammonia_Emissions_from_Livestock_in_the_United_States_From_Farm-Level_Models_to_a_New_National_Inventory/6714665.

¹³⁴ *Id.* at 75, 80.

As explained by the author, “this result shows the model’s skill in capturing big picture emissions as well as the ammonia emissions variability driven by practices in addition to meteorology which has been shown in both seasonal and daily evaluations.”¹³⁵

Another model that EPA at least acknowledges is the U.S. Department of Agriculture’s Farm Systems Model, which includes process-based models for estimated ammonia and hydrogen sulfide emissions from dairy operations. The model has even been shown to accurately predict ammonia emissions from NAEMS dairy barns and manure storage structures.¹³⁶

If these models are good enough for EPA’s emissions inventory and do a reasonable job of predicting NAEMS emissions, then they should be good enough for estimating emissions from AFOs for the purpose of applying for CAA permits or reporting qualifying releases. For example, if the question is whether a facility emits more than a certain threshold, such as 10 or 100 tons of ammonia per year,¹³⁷ then the CMU model is sufficient. This is particularly true where we already know that many AFOs emit well above the higher threshold.¹³⁸

EPA’s foot-dragging is based on the deeply flawed premise that the Agency won’t know how much pollution AFOs emit until after the agency’s planned EEMs are complete. This premise is false. EPA has a variety of options for estimating emissions, and these options are in fact better than the EEMs—they are more consistent with CAA requirements and SAB recommendations, and they are accurate enough to provide the kinds of information that the industry, regulators, and residents need to comply with the law. EPA has no legitimate basis for dragging this process out any longer.

¹³⁵ *Id.* at 80.

¹³⁶ 2018 QAPP at 19; *see also* C. Rotz et. al., *Ammonia emission model for whole farm evaluation of dairy production systems*, 43 J. ENV’T. QUAL. 1143 (2014).

¹³⁷ *See, e.g.*, 42 U.S.C. §§ 7412(a)(1) (definition of “major source” of hazardous air pollutants); § 7479(1) (definition of “major emitting facility”); § 7602(j) (definition of “major emitting facility”).

¹³⁸ *See, e.g.*, Notice of Lodging of Consent Decree Under CERCLA, 69 Fed. Reg. 11,649 (Mar. 11, 2004). The company subject to this Consent Decree, Buckeye Egg Farm L.P., reported ammonia emissions of over 800 tons per year from one facility, over 375 tons per year from a second facility, and “nearly 275” tons per year from a third facility. *Id.* at 11,649–50.

VI. IF EPA DECIDES TO PROCEED WITH THE FLAWED EEM DEVELOPMENT PROCESS, IT MUST IMMEDIATELY RESCIND THE SAFE HARBOR PROVISION.

As explained above, EPA’s failure to regulate air pollution from AFOs causes both significant health impacts and a dearth of information available to impacted individuals about pollutant releases and impacts. Additionally, AFO air pollution and the resulting odors are diminishing the quality of life and depressing property values in communities across the nation.¹³⁹ EPA must immediately rescind the enforcement protections granted to AFOs. In addition, EPA must rely on external sources and public input when developing any draft EEMs based on the agency’s inherently flawed monitoring data and development process.

A. EPA Should Immediately Rescind the Safe Harbor Provisions of the Air Consent Agreement.

Although EPA has the authority to rescind the safe harbor provisions of the Air Consent Agreement at any time, it has refused to do so, choosing instead to grant extended immunity to AFOs that emit significant air pollution and cause adverse public health impacts in surrounding communities. EPA’s continued refusal to enforce the law against AFOs is an abdication of its enforcement authority. It contradicts congressional intent and strips affected communities of their legal and procedural remedies to address increased air emissions from AFOs. Thus, EPA should take immediate action to rescind the safe harbor provisions of the Air Consent Agreement.

B. EPA Should Not Finalize Any EEMs Without Robust Public Participation.

If EPA proceeds with its protracted EEM development process, it must prioritize public participation. During the decades-long process of developing the EEMs, the Agency has primarily engaged the AFO industry. EPA intends to hold a “stakeholder review period” once new draft EEMs are available but the timing of this review period is currently unknown.¹⁴⁰ It is

¹³⁹ See, e.g., Y. HONG & P. EBNER, PURDUE ANIMAL SCIENCES, IMPACT OF CFO ODOR & ODOR SETBACK MODELS, (JAN. 2017), https://ag.purdue.edu/cfo/Documents/ID-485_CFO_2017.pdf; ROMAN KEENEY, PURDUE EXTENSION, COMMUNITY IMPACTS OF CAFOS: PROPERTY VALUES (2008), <https://www.extension.purdue.edu/extmedia/ID/ID-363-W.pdf>.

¹⁴⁰ See EPA, *National Air Emissions Monitoring Study: Timeline for the Release of AFO Emission Models*, (last visited Oct. 25, 2021), <https://www.epa.gov/afos-air/national-air-emissions-monitoring-study>.

unclear who EPA considers “stakeholders” in this process, but presumably this “stakeholder review period” involves EPA releasing all EEMs simultaneously for a 30-day public comment period. This would be a wholly inadequate means to engage the public, especially in comparison to the extensive influence that industry groups have had throughout the EEMs process. A robust notice and comment opportunity is necessary to meaningfully engage *all* stakeholders and ensure that the EEMs do not exacerbate health impacts and inequalities.

Rural communities experiencing the detrimental effects of AFOs lack access to complete information about the impacts and regulation of AFOs, and rarely are provided with a forum to voice their concerns and seek remedies from the government. Rather, EPA has frequently used the EEMs process as a shield to avoid meaningfully responding to and acting on AFO air pollution concerns raised with the Agency. A transparent and accessible notice and comment period for the EEMs will provide a necessary—albeit much-delayed—opportunity for the Agency to hear from the stakeholders most impacted by EPA’s decisions regarding EEMs.

Furthermore, the complexity and abstract nature of environmental modeling presents unique and significant barriers to full public participation.¹⁴¹ EPA should take steps to overcome and mitigate these barriers. For example, a comment period of 90 days would provide impacted communities and advocacy groups the time needed to assess the impacts of the EEMs and engage in outreach to ensure that all interested parties are aware and informed. The complex nature of the EEMs also means that groups and members of the public likely will need to engage experts to review the EEMs and develop technical comments, necessitating a longer comment period. EPA should also hold public listening sessions with content aimed at meaningfully engaging the public in EEMs development, such as layperson explanations of the process of developing the EEMs and the EEMs’ impacts and limitations. Similarly, EPA should ensure members of the public are able to hear each other’s comments.

¹⁴¹ See generally J. Fine & D. Owen, *Technocracy & Democracy: Conflicts Between Models & Participation in Environmental Law & Planning*, 56 HASTINGS L.J. 901 (2005), https://repository.uhastings.edu/cgi/viewcontent.cgi?article=3590&context=hastings_law_journal.

Robust public participation in the finalization of any EEMs is also necessary for EPA to comply with the President’s Executive Orders pertaining to environmental justice.¹⁴² AFO air pollution is an environmental justice issue—“people of color and others who have been historically underserved, marginalized, and adversely affected by persistent poverty and inequality” are far more likely to be exposed to AFO air pollution and suffer the health, quality of life, and financial consequences.¹⁴³ The Biden Administration has pledged to make environmental justice a priority and directed EPA to “assess whether, and to what extent, its programs and policies perpetuate systemic barriers to opportunities and benefits for people of color and other underserved groups.”¹⁴⁴ Agencies are further tasked with “evaluat[ing] opportunities, consistent with applicable law, to increase coordination, communication, and engagement with community-based organizations and civil rights organizations.”¹⁴⁵ The finalization of the EEMs is an important opportunity for EPA to advance these objectives, and the failure of EPA to ensure meaningful public participation in the EEMs would contravene the Administration’s directives.

The petitioners, as well as many other groups that work with rural communities impacted by AFOs, also could provide EPA with valuable information and context. Two petitioners are environmental justice organizations, which work with communities adversely affected by AFO air pollution, including in North Carolina and California. Many of the petitioners have sought to engage with EPA on the issue of air pollution from AFOs for well over a decade, including challenging the Agreement at the EAB and in the D.C. Circuit, submitting the 2009 CAFO Source Petition, and submitting the 2011 Ammonia Petition. The petitioners have also extensively worked with, and represented in legal actions, members of communities directly

¹⁴² See Exec. Order No. 13985, Advancing Racial Equity & Support for Underserved Communities Through the Federal Government, 86 Fed. Reg. 7009 (Jan. 25, 2021), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1817697/pdf/ehp0115-000317.pdf>.

¹⁴³ See *id.* See also 2017 OIG REPORT at 3, see also K. Donham et al., *Community Health & Socioeconomic Issues Surrounding Concentrated Animal Feeding Operations*, 115 ENV’T. HEALTH PERSPECTIVES (2007).

¹⁴⁴ Exec. Order No. 13985; see also Exec. Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 59 Fed Reg. 7629 (Feb. 16, 1994) (“[E]ach Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations. . .”).

¹⁴⁵ Exec. Order No. 13985.

impacted by AFO pollution. Therefore, the petitioners possess extensive expertise that would be valuable in the process of finalizing the EEMs.

VII. CONCLUSION

The Air Consent Agreement has been an unmitigated failure. During EPA's extended amnesty and fundamentally inadequate NAEMS process, jurisdictions like California have estimated emissions and permitted AFOs with readily available data.¹⁴⁶ The SAB has demonstrated that EPA's NAEMS and EEM development processes reflect the principle of "garbage in, garbage out." EPA has blown far past its 2007 "limited" deferral representation to the D.C. Circuit and its 2017 response to the OIG, landing rural communities in a purgatory of legalized air pollution. Further delay only demonstrates EPA's abdication of its enforcement responsibility and will not yield a better outcome.

We support EPA efforts to develop state-of-the-art and accurate emissions estimating methodologies, but that process should never have been used to shield the industry from enforcement, and in any case, it is well past the time when the NAEMS and EEM process could justify a temporary suspension of applicable law. The reality is that facts and science change over time, and emissions assumptions will also change over time. There is no end to that process. However, EPA can, and routinely does, estimate emissions from many sources of air pollution, including AFOs, using the best science available. The Agency must do the same here. EPA must end the Air Consent Agreement, immediately publish the best currently available emissions methods or emissions factors for each pollutant, and enforce the CAA.

The petitioners therefore petition EPA to rescind the Air Consent Agreement granting enforcement protections to nearly 14,000 AFOs. In addition to a written response confirming the agency's rescission of the Air Consent Agreement, we petition EPA to act immediately to implement CAA permitting and reporting programs, prioritize enforcement actions against AFOs contributing to air pollution and related health impacts in environmental justice communities, and develop process-based models unbound from an unending license to pollute.

¹⁴⁶ EPA, based on its CAA oversight, has actual knowledge of jurisdictions like California, including the San Joaquin Valley Unified Air Pollution Control District, with AFO permitting programs and State Implementation Plan programs applicable to such facilities.

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