

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

)
Oil and Natural Gas Sector:) **Docket No. EPA-HQ-OAR-2010-0505**
Emission Standards for New and) **Docket No. EPA-HQ-OAR-2017-0346**
Modified Sources: Stay of)
Certain Requirements)
) *Via email*
) *August 25, 2017*
Oil and Natural Gas Sector)
Emission Standards for New and)
Modified Sources: Three Month)
Stay of Certain Requirements)
)

We submit these supplemental comments on behalf of Clean Air Council, Clean Air Task Force, Center for Biological Diversity, Earthjustice, Earthworks, Environmental Defense Fund, Environmental Integrity Project, Environmental Law and Policy Center, National Parks Conservation Association, Natural Resources Defense Council, and Sierra Club (together, “Joint Environmental Commenters”) in response to technical comments submitted by the American Petroleum Institute (“API”) on the Environmental Protection Agency’s (“EPA”) proposed rule to stay certain portions of the New Source Performance Standards (“NSPS” or “2016 Rule”) 40 C.F.R. Part 60 Subpart OOOOa, “Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources: Stay of Certain Requirements” 82 Fed. Reg. 27,645 (June 16, 2017) (“proposed stay”). *Comments of API*, EPA-HQ-OAR-2010-0505-12245 (Aug. 8, 2017) (“API Technical Comments”).

API’s technical comments cannot support EPA’s proposed stays, as the comments focus on recommendations for *substantive revisions to the NSPS*, which EPA specifically and unambiguously stated it is *not* accepting in this rulemaking. Addressing these issues without a new notice and comment procedure would be an egregious violation of basic procedural requirements.

Furthermore, the narrow technical “issues” raised by API are ancillary to the major provisions of the NSPS that EPA is proposing to stay, and cannot justify the breadth of the proposed stay. Moreover, API’s characterizations of technical “issues” with the NSPS are misleading and

inaccurate—many of these “issues” were already raised and responded to in the context of the NSPS rulemaking.¹

I. API’s technical comments exceed the scope of this rulemaking and cannot provide a rationale for EPA to stay requirements of the NSPS.

API’s technical comments exceed the scope of the proposed rulemaking, and cannot provide justification for EPA to stay any requirements in the NSPS. EPA specifically stated in its stay proposals that it is “not taking comment at this time on substantive issues concerning these requirements, or on any of the other provisions subject to the reconsideration.” 82 Fed. Reg. at 27,648. API’s technical comments, however, are specifically directed at “substantive issues concerning” the requirements of the NSPS, focusing primarily on alleged “substantive issues” associated with the NSPS and API’s recommendations for adjusting those provisions. Yet this discussion of perceived technical issues with the NSPS—and suggestions that EPA “update the rule language,” API Technical Comments at 2—are precisely the type of “substantive” comments “concerning these requirements” that EPA explicitly said it would not accept or consider as part of its rulemaking analyzing the proposed stays. As EPA expressly emphasized, such substantive comments must be reserved for a future rulemaking. 82 Fed. Reg. at 27,648 (“A separate Federal Register notice published in the near future will specifically solicit comment on substantive issues concerning these requirements.”). Joint Environmental Commenters took EPA at its word and focused their comments to the matters actually noticed by EPA. Joint Environmental Commenters, and doubtless myriad other stakeholders, would have submitted comments on the “substantive issues” had EPA noticed those issues for comment. Instead, EPA expressly disavowed that these issues are the subject of this rulemaking. A stay rule that relies upon materials that EPA expressly designated as outside the scope of this proceeding would be the starkest possible violation of its basic procedural obligations.

Accordingly, EPA should not consider API’s technical comments in the context of finalizing the rule it proposed. We file this supplemental response to demonstrate that API’s technical comments are not only out of order in this proceeding, but also one-sided, incomplete and often inaccurate.

II. API’s presentation of alleged “technical issues” is inaccurate, misleading and incomplete and does not support the broad stay of major NSPS requirements.

¹ Because API’s technical comments—submitted on the final day of the comment period and not posted on the public docket until August 17—went well beyond the scope of the proposal, we could not have anticipated its arguments before the close of the comment period. Accordingly, we are submitting these comments as soon as possible following API’s submission.

Even if EPA could consider API's technical comments, API's alleged "technical issues" are not issues at all. API's presentation is inaccurate, misleading, and incomplete. Moreover, EPA responded to many of these technical claims in the NSPS rulemaking, and commenters here provide no new information that would serve as a basis for EPA modifying its position.

Even if EPA could consider the technical issues raised by API, and even assuming that these "issues" are valid (which they are not), none of the objections raised by API supports the broad two-year stay of crucial provisions in the NSPS. API raises limited, ancillary technical issues that would affect only a small portion of total facilities subject to the stayed provisions of the Rule. Moreover, many of these issues could be resolved by EPA issuing guidance, with no need to broadly stay large swathes of the NSPS, as API itself has recognized. API, Petition for Reconsideration for Subpart OOOOa 16 (Aug. 2, 2016) (declining to seek reconsideration on alternative means of emissions limitation ("AMEL") and low-production well issues and stating that EPA could address the AMEL approval issues "by provid[ing] guidance to reduce burden on operators and EPA.") Furthermore, API notes that these specific issues could be resolved more quickly than the two-year period proposed by EPA. *See* API Technical Comments at 2 ("While the agency has proposed to extend the compliance dates for a targeted subset of the rule requirements for two years, there is nothing preventing the agency from reconsidering these issues, along with the other technical issues raised in API's August 2nd petition, in less than two years.")

We consider each of the specific "technical issues" raised by API below.

Delay of Repair. In the 2016 Rule, EPA responded to concerns commenters raised related to repair times by providing additional flexibility for operators to complete repairs. For instance, the NSPS allows 30 days for normal repairs and a delay of repair period of two years or the next shutdown, shut-in, or blowdown, whichever is earlier, for technically infeasible repairs. *Id.* at 35,858. API now argues that a blowdown or emergency or unplanned shutdown, during which time these delayed repairs must be made, are often unexpected and sudden, and there may not be enough preparation time to make the necessary repairs. API Technical Comments at 2. API's argument ignores the reality that leaks are *discovered* not during these blowdown or shutdown events, but during routine leak detection inspections. Once a leak is found, operators can order replacement parts and make preparations immediately upon discovery, and can fix these leaks as soon as possible when a blowdown or unexpected shutdown occurs, as EPA recognized in the 2016 Rule. *See* EPA, Response to Public Comments on Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources, EPA-HQ-OAR-2010-0505-7632, at 4-525 (May 2016) ("RTC") ("We note that unavailability of supplies or custom parts is not a justification for delaying repair beyond the timeline in the final rule since the operator can plan for repair of fugitive emission components by having stock readily accessible or obtaining the

parts within 30 days after finding the fugitive emissions.”). API’s suggestion now that compliance with the delay of repair provisions is burdensome—provisions which EPA revised to be more flexible in response to comments from API and others—is unsubstantiated and inconsistent with the record.

Moreover, the narrow complaints API raises with respect to the delay of repair provisions do not support a stay of the entire NSPS leak detection and repair (“LDAR”) program; nor do they demonstrate that operators will face burdens on account of compliance with the NSPS, as API now claims. API acknowledges that the delay-of-repair situations “will occur infrequently,” API Technical Comments at 2, which is consistent with EPA’s conclusions in the 2016 Rule that “the majority of leaks are fixed when they are found.” 81 Fed. Reg. at 35,858. API offers no reason why the entire LDAR program should be stayed because of concerns over how the requirements operate with regard to a tiny subset of leaks.²

Third Party Equipment. API offers no data on the prevalence of mixed ownership sites that would support a stay of the LDAR requirements, and beyond its blanket assertion that there may be legal and practical difficulties associated with monitoring at these sites, API Technical Comments at 3, offers no support for the proposition that EPA’s requirements, as written, impose burdens on operators.

Moreover, as with the delay of repair provisions, commenters raised this concern in their comments on the proposed NSPS and EPA considered and responded to it, concluding “the resolution for any leaking components identified during surveys can be managed by the operator through cooperative agreements with other potential owners at the site.” RTC at 4-282. API’s generalized assertions offer no new information and do nothing to call into question EPA’s previous conclusions. Nor do they attempt to explain why the one-year lead time the agency provided for compliance with the leak detection and repair provisions was insufficient to ensure any necessary arrangements among operators were in place.

Low-Production Wells. In the 2016 Rule, EPA determined that “well site fugitive emissions are not correlated with levels of production, but rather based on the number of pieces of equipment and components.” 81 Fed. Reg. at 35,856. Despite its assertion that some well sites have fewer components than others, or that some have fewer components than EPA’s average well site, API provides no evidence that low-production wells have fewer components than

² API also suggests that there may be situations in which a compressor station shutdown or well shut-in does not necessarily result in the blowdown of all equipment parts. Even assuming that is the case, EPA need not stay the LDAR provisions to address these concerns but could, as API suggests in its reconsideration petition, issue a very narrowly targeted rule amendment to address this unique situation.

average. API Technical Comments at 3. In fact, Joint Environmental Commenters submitted data in comments on the proposed NSPS showing that low-production wells can emit *more* methane on average than higher-production wells. *Comments of Clean Air Task Force, et al.*, EPA-HQ-OAR-2010-0505-6984, 36-42 (Dec. 9, 2015). To the extent that API is proposing a revision to the NSPS to exclude low-component wells from LDAR requirements, API Technical Comments at 3-4, that is not only well beyond the scope of this rulemaking, but is also entirely separate from the low-production well issue discussed in EPA's stay proposal. It cannot be a basis for staying the LDAR requirements.

Moreover, so-called "low-production" wells account for a small fraction of affected facilities, and thus the stay of the entire NSPS LDAR program cannot be justified based on any concerns regarding these sources. Indeed, the exemption of low-production wells from LDAR requirements that EPA considered in the proposed NSPS would affect only 12% of the oil and gas wells currently subject to the LDAR program. *Comments of Dr. David Lyon and Hillary Hull*, EPA-HQ-OAR-2010-0505-11314, 18-19 (Aug. 9, 2017).

Impact of a 60% Reduction in Efficiency Assumption on BSER. API mischaracterizes the best system of emissions reduction ("BSER") analysis required of EPA. API claims that BSER establishes "a threshold limit where controlling a source above the threshold is considered cost effective and controlling a source below the threshold is not." API Technical Comments at 3. This is patently incorrect. BSER does *not* require a formal cost-benefit showing, and costs are one of nine different factors that play into BSER.³ Courts have held that a BSER will only be struck down on cost considerations if the costs of control are "exorbitant," such that they are more than the industry could bear and survive. *Lignite Energy Council v. EPA*, 198 F.3d 930, 933 (D.C. Cir. 1999); *Portland Cement Ass'n v. Train*, 513 F.2d 506, 508 (D.C. Cir. 1975); 81 Fed. Reg. at 35,829. API's assertion that BSER must meet a cost-benefit test is thus flatly wrong.

Moreover, API erroneously suggests that EPA was mistaken in concluding that semi-annual leak detection and repair results in a 60% reduction in fugitive emissions. API quotes a passage from the preamble to the proposed NSPS to suggest that EPA took its emission reduction rate values directly from the Colorado Air Quality Control Commission ("AQCC"), and that EPA made a

³ These nine factors include whether, and by what date, the standards are (1) "achievable" through a (2) "system of emission reduction," whether that system is the (3) "best" that EPA has determined to be (4) "adequately demonstrated," the (5) "cost" of those standards, any resulting (6) "nonair quality health and environmental impacts," (7) "energy requirements," the (8) "amount of air pollution reduced" by the standards, and how the standard may drive (9) "technological innovation." 80 Fed. Reg. 64,510, 64,538 (Oct. 23, 2015) (*quoting Sierra Club v. Costle*, 657 F.2d 298, 326, 347 (D.C. Cir. 1981)); *see also* 42 U.S.C. § 7411(a)(1), (b)(1)(B), (h)(1).

clerical “material mistake” by using a 60% reduction for semiannual inspections, rather than AQCC’s value of 60% reductions for quarterly inspections. API Technical Comments at 4.

But this claim is plainly at odds with the proposed NSPS, where EPA made clear that it considered Colorado’s analysis along with other information and “engineering judgement and experience obtained through [EPA’s] existing programs for finding and repairing leaking components” to determine the emission reductions associated with quarterly, semi-annual, and annual leak detection and repair surveys. 80 Fed. Reg. 56,593, 56,635; *see also* RTC at 4-59 (“The potential emission reduction percentages used for the BSER analysis for the final rule are based on fugitive emissions data and EPA’s engineering judgment *and not fully on the Colorado cost-benefit analysis*. We reviewed data from the Colorado cost benefit analysis, ICF leak analysis, and calculated emission reductions by monitoring frequency and leak definition using the procedures in the EPA Protocol document.”) (emphasis added); EPA, Background Technical Support Document for the Final New Source Performance Standards 40 CFR Part 60, Subpart OOOOa, EPA-HQ-OAR-2010-0505-7631, at 41 (May 2016) (“From the review of the studies in the white paper and the Colorado Economic Impact Analysis, the EPA expects the emission reductions from the implementation of an OGI monitoring and repair program to vary depending on the frequency of monitoring Based on the information in the studies and EPA’s engineering judgement, the potential emission reduction percentages for the proposed rule were estimated to be 40 percent for annual monitoring, 60 percent for semiannual monitoring, and 80 percent for quarterly monitoring.”). API’s erroneous claim provides no support for staying or revisiting the LDAR provisions.

Alternative Means of Emission Limitation. The AMEL provisions were added to the NSPS LDAR program at the request of industry commenters and others. 82 Fed. Reg. at 25,731; *see also* API, *Comments on EPA’s NSPS for the Oil and Natural Gas Sector*, at 138 (Dec. 4, 2015) (requesting a “streamlined approval process” for deeming regulated entities compliant by alternative means). API now argues that purported vagueness associated with this exception should justify the delay of the underlying LDAR program. API goes on to claim that the proposed stay of the LDAR requirements will have “minimal environmental impact” because several states have their own LDAR programs that may qualify as AMEL. API Technical Comments at 5. This argument is erroneous and ignores the many states that lack LDAR programs, where additional harmful emissions will occur unabated during the course of the two-year stay. *Comments of Dr. David Lyon and Hillary Hull*, EPA-HQ-OAR-2010-0505-11314, 18-19 (Aug. 9, 2017) (projecting 72,250 tons of methane, 20,033 tons of volatile organic compounds, and 759 tons of hazardous air pollutants emitted from wells in states without LDAR programs during the two years of the stay). Furthermore, API’s references to costly AMEL approval “for a separate matter,” unrelated to the LDAR provisions at issue here, and wait times for AMEL approval for control devices also unrelated to the LDAR provisions, have no bearing

whatsoever on AMEL procedures for LDAR. API Technical Comments at 5. Indeed, API does not point to a single instance where a company has even sought AMEL approval for compliance with the NSPS, let alone been denied it.

Moreover, API's technical complaints regarding AMEL program are narrow and do not support a broad stay of the LDAR provisions in the NSPS. API has previously indicated that any AMEL "issue" could be resolved through EPA guidance. API, *Petition for Reconsideration for Subpart OOOOa*, at 16 (Aug. 2, 2016) (requesting "EPA . . . provide guidance [on AMEL] to reduce burden on operators and EPA.") Moreover, staying LDAR standards in *all* states because a few states have LDAR programs that may qualify for AMEL would be plainly arbitrary. Most importantly, EPA has no authority to stay the LDAR provisions simply to implement the agency's policy preference of fostering the development of AMEL.

P.E. Certification. API claims that the requirement that a Professional Engineer design and certify closed vent systems and/or certify technical infeasibility associated with control of a pneumatic pump ("P.E. Certification") does not add any "significant environmental benefit," yet results in additional costs. API Technical Comments at 6. However, EPA abandoned the proposed rule's requirement that operators obtain a third-party certification in favor of the final rule's requirement that allows operators to use in-house Professional Engineers in response to feedback from API and other industry groups emphasizing the availability of in-house professional engineering staff. API, *Comments on EPA's NSPS for the Oil and Natural Gas Sector*, at 49 (Dec. 4, 2015).

In its comments on the proposed NSPS, API expressed that a third-party certification step was unnecessary, but did not object to the use of professional engineers, in part because "[o]il and natural gas company engineering staff, with experience in the oil and natural gas industry and emissions control systems, and *many with PE registration*, are able to design systems effectively." API, *Comments on EPA's NSPS for the Oil and Natural Gas Sector*, at 49 (Dec. 4, 2015) (emphasis added); *see also id.* at 78 (to establish technical infeasibility of an existing control device to handle additional gas from a pneumatic pump, API stated that "EPA could provide provisions in the rule for an operator to make an engineering determination").

API was not the only party to comment on the ability of operators to utilize in-house Professional Engineers. The American Gas Association raised concerns over safety issues associated with control device design or configuration, a concern that supported EPA's inclusion of the P.E. Certification requirement. RTC at 5-7. In response to a comment that third-party compliance audits "will dramatically increase the costs of the program," EPA responded that:

While the EPA continues to believe that independent third party verification can furnish more, and sometimes better, data about regulatory compliance, we have explored alternatives to the independent third party verification. Specifically, the “qualified professional engineer” model was assessed to focus on the element of engineering design. The final rule requires a professional engineer certification of technical infeasibility of connecting a pneumatic pump to an existing control device, and a professional engineer design of closed vent systems. These certifications will ensure that the owner or operator has effectively assessed appropriate factors before making a claim of infeasibility and that the closed vent system is properly designed to verify that all emissions from the unit being controlled in fact reach the control device and allow for proper control. We believe this simplified approach will reduce the burden imposed on all affected facilities, including those owned by small businesses.

EPA, Regulatory Impact Analysis of the Final Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources, EPA-452/R-16-002, 6-14 (May 2016).

API’s newly stated opposition to the Professional Engineer certification requirement is thus a reversal from its previous position that in-house Professional Engineers could “effectively” implement the 2016 Rule, which helped to persuade EPA to adopt the requirement in the first place. API, *Comments on EPA’s NSPS for the Oil and Natural Gas Sector*, at 49. API’s newfound objections should not be given credence and do not support a stay.

Furthermore, API’s generalized and unsubstantiated claims that it would “add[] significant cost and burden” to require P.E. Certification of closed vent systems, do not support staying these requirements. See API Technical Comments at 6. API states that this requirement is expected to “cost *some* API members between \$4,000 – 7,500 on average per certification,” but does not provide any source for that projection, nor estimate the number of actually-affected companies. *Id.* (emphasis added). Indeed, even assuming the accuracy of the unsubstantiated cost figures that API cites, those represent one-time expenditures per closed-vent system that account for an extremely small fraction of company revenues. EPA considered the overall costs of the NSPS and found them reasonable, and the issue of P.E. Certification does not alter that finding, nor does it provide a basis to stay the NSPS.

Pneumatic Pumps. API further objects to the addition of an exemption from requirements for pneumatic pumps that industry specifically requested. 81 Fed. Reg. at 35,850. API now claims that the requirement that pumps at greenfield sites are not eligible for a technical infeasibility exemption is unclear, and puts operators into a “potentially untenable situation.” API Technical Comments at 6.

While API's arguments are somewhat vague, API appears to suggest that it is not always feasible for operators of greenfield sites to route emissions to either a control device or to a process, as required by the NSPS.

Yet longstanding requirements in Wyoming, as well as newly adopted provisions in California, demonstrate the fallacy of API's claims. Wyoming has required operators of new and modified single wells and multi-well sites to control discharge streams from natural gas-operated pneumatic pumps since 2010.⁴ To control pump emissions, Wyoming provides operators with options including routing the pump discharge streams to closed loop systems or a control device capable of controlling emissions by 98%, or replacing the natural-gas powered pump with one powered by electricity or instrument air.⁵

Wyoming's Department of Environmental Quality ("DEQ") revised its guidance on these standards in 2013 and again in 2016. During these revisions, DEQ considered the technical feasibility and cost-effectiveness of requiring the control of pneumatic pump emissions by routing them to a control device or closed loop system, or by replacing gas-operated pumps with electric or air-driven pumps. And in each instance, DEQ determined that it was both technically-feasible and cost-effective to maintain these requirements. Specifically, in 2013, DEQ stated that "in communication with Industry over possible control thresholds of pneumatic pumps, Industry made the commitment to control pneumatic pumps at all new and modified well sites. Therefore, the Division will consider the control of pneumatic pump emissions by at least 98% as being representative of [Best Available Control Technology]."⁶ In 2016, DEQ once again revised its Permitting Guidance, and along with it, its analysis of what constitutes Best Available Control Technology for sources in this sector. Again, no operator objected to the pneumatic pumps standards.⁷

⁴ Wyoming DEQ, Division of Air Quality, Ch. 6, Sec. 2 Oil and Gas Production Facilities Permitting Guidance, 9, 14, 19 (March 2010) ("2010 Permitting Guidance"), Ex. 1; Wyoming Ch. 6, Sec. 2 Oil and Gas Production Facilities Permitting Guidance, 11, 15, 21, 26 (Sept. 2013) ("2013 Permitting Guidance"), Ex. 2; Wyoming Ch. 6, Sec. 2 Oil and Gas Production Facilities Permitting Guidance 10, 16, 21 (May 2016) ("2016 Permitting Guidance"), available at

<http://deq.wyoming.gov/media/attachments/Air%20Quality/New%20Source%20Review/Guidance%20Documents/5-12-2016%20Oil%20and%20Gas%20Guidance.pdf>.

⁵ 2010 Permitting Guidance at 9, 14, 19; 2013 Permitting Guidance 11, 15, 21, 26; 2015 Permitting Guidance at 10, 16, 21.

⁶ Wyoming DEQ, Division of Air Quality, Proposed Revisions to the Ch. 6, Sec. 2 Oil and Gas Production Facilities Permitting Guidance, Technical Support Document, p.8 (Sept. 2013).

⁷ See Wyoming DEQ, Response to Comments on Revisions to Oil and Gas Production Facilities, Ch. 6, Sec. 2 Permitting Guidance (DEQ did not respond to any comments regarding pneumatic pump emissions in its Response to Comments document), available at

<http://deq.wyoming.gov/media/attachments/Air%20Quality/New%20Source%20Review/Guidance%20Documents/5-12-2016%20Oil%20and%20Gas%20Guidance%20-%20Response%20to%20Comments.pdf>.

Wyoming is not the only state to require operators to control emissions from pneumatic pumps at new facilities. California’s Air Resources Board (“ARB”) recently finalized rules that prohibit venting from new pneumatic pumps as of January 1, 2019, allowing no exceptions.⁸ In proposing the requirement, ARB noted the options available to operators in meeting the “no venting” standard: “[T]he control strategies include controlling devices with use of a vapor collection system or modifying devices to use compressed air or electricity to operate. These options are designed to provide a regulated party with flexibility to control emissions of methane from a variety of devices and pumps.”⁹ As in Wyoming, operators did not oppose the California requirements.¹⁰ Both the Wyoming and California requirements demonstrate the feasibility of controlling pump emissions from new facilities, as EPA requires, and the lack of merit in API’s claims.

Moreover, it is fundamentally overbroad to stay all requirements for a source category based on availability of an exemption for technical infeasibility. Although API argues that there is a lack of clarity from EPA on the meaning of the term “greenfield,”¹¹ API Technical Comments at 6, there is no reason that the term “greenfield” cannot be further defined by EPA in a guidance document, without broadly staying the pneumatic pump provisions.

⁸ 17 C.C.R. § 95668(e)(4).

⁹ California ARB, Staff Report: Initial Statement of Reasons, 52, (May 31, 2016), available at <https://www.arb.ca.gov/regact/2016/oilandgas2016/oilgasisor.pdf>. See also *id.* at 102 (noting that “[S]taff has provided several options that owners or operators can use to comply with the proposed regulation standard of not venting gas, including replacing gas powered pumps with electric pumps, collecting the vented gas with the use of a vapor collection system, or using compressed air to operate.”)

¹⁰ See California ARB, Final Statement of Reasons (May 2017) (summarizing comments and agency response on proposed provisions and not identifying any comments in opposition to the pump requirements), available at [file:///Users/Bessie/Library/Mobile%20Documents/com~apple~CloudDocs/EDF/state%20policy/CA/final%20state%20of%20reasons%20.pdf](file:///Users/Bessie/Library/Mobile%20Documents/com~apple~CloudDocs/EDF/state%20policy/CA/final%20statement%20of%20reasons%20.pdf).

¹¹ EPA defines a greenfield site as a “site, other than a natural gas processing plant, which is entirely new construction.” 81 Fed. Reg. at 35,850 (June 3, 2016).

Respectfully submitted,

Rosalie Winn

Peter Zalzal

Alice Henderson

Rachel Fullmer

Environmental Defense Fund

2060 Broadway, Ste. 300

Boulder, CO 80302

rwinn@edf.org

pzalzal@edf.org

Tomás Carbonell

Environmental Defense Fund

1875 Connecticut Ave., 6th Floor

Washington, D.C., 20009

tcarbonell@edf.org

*Counsel for Environmental
Defense Fund*

Darin Schroeder

Ann Weeks

Clean Air Task Force

18 Tremont St., Ste. 530

Boston, MA 02108

dschroeder@catf.us

aweeks@catf.us

Counsel for Earthworks

Meleah Geertsma

Natural Resources Defense Council

2 N. Wacker Drive, Suite 1600

Chicago, IL 60606

mgeertsma@nrdc.org

*Counsel for Natural Resources Defense
Council*

Susannah Weaver

Sean Donahue

Donahue & Goldberg, LLP

1111 14th Street, NW

Suite 510A

Washington, DC 20005

susannah@donahuegoldberg.com

Counsel for Environmental Defense Fund

Andres Restrepo

Sierra Club

50 F St., NW, Eighth Floor

Washington, DC 20001

Andres.Restrepo@sierraclub.org

Counsel for Sierra Club

Adam Kron

Environmental Integrity Project

1000 Vermont Ave. NW, Suite 1100

Washington, DC 20005

akron@environmentalintegrity.org

*Counsel for Environmental
Integrity Project*

Howard M. Crystal

Center for Biological Diversity

1411 K Street, N.W. Suite 1300

Washington, DC 20005

hcrystal@biologicaldiversity.org

Counsel for Center for Biological Diversity

Tim Ballo

Earthjustice

1625 Massachusetts Ave., NW, Ste. 702

Washington, DC 20036

tballo@earthjustice.org

*Counsel for Clean Air Council and Sierra
Club*

Lauren Pagel, Policy Director

Earthworks

1612 K Street NW, Ste. 808

Washington, DC 20006

lpagel@earthworksaction.org

Scott Strand

Environmental Law & Policy Center

15 South 5th Street, Suite 500

Minneapolis, MN 55402

sstrand@elpc.org

*Counsel for Environmental Law & Policy
Center*

Stephanie Kodish

National Parks Conservation Association

706 Walnut Street, Ste. 200

Knoxville, TN 37902

skodish@npca.org

*Counsel for National Parks Conservation
Association*