Berks Gas Truth * Biodiversity Conservation Alliance * Californians for Western Wilderness * Center for Biological Diversity * Center for Health, Environment and Justice * Clean Water Action * Colorado Environmental Coalition * Delaware Riverkeeper Network * Drilling Mora County * Earthjustice * Earthworks * EcoFlight * Environmental Defense Fund * National Parks Conservation Association * National Wildlife Federation * Natural Resources Defense Council * Pennsylvania Environmental Defense Foundation * Pennsylvania Forest Coalition * Powder River Basin Resource Council * Protecting Our Waters * Riverkeeper, Inc. * San Juan Citizens Alliance * Sierra Club * Southern Utah Wilderness Alliance * Upper Green River Alliance * Western Environmental Law Center * Western Organization of Resource Councils * Western Resource Advocates * WildEarth Guardians * Wilderness Workshop * WV Surface Owners' Rights Organization

November 30, 2011

Lisa Jackson, Administrator
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Ave., NW
Washington, D.C. 20460

Re: Docket ID Number EPA–HQ–OAR–2010–0505

Dear Administrator Jackson:

Thank you for the opportunity to provide comments on this important Clean Air Act rulemaking to revise EPA's New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) for the oil and gas industry. The organizations signing this letter submit these comments on behalf of their members and supporters, many of whom live in communities throughout the United States that are facing critical health threats as a result of pollution from the oil and gas industry.

Oil and gas development is rapidly expanding across the United States and polluting the air in major metropolitan areas such as Dallas-Fort Worth, Denver, and Pittsburgh, as well as in rural communities in many states, including Wyoming, New Mexico, Colorado, Pennsylvania, and New York. Oil and gas development threatens local communities by emitting smog-forming compounds that can lead to serious respiratory illness as well as toxic chemicals that cause cancer. Drilling and development also pose a threat nationally and globally by emitting substantial amounts of methane, a potent greenhouse gas that causes global warming. In this rulemaking, EPA has an important opportunity to protect the public from these significant threats under the Clean Air Act.

With respect to EPA's two new proposed rules, we appreciate that EPA has taken significant steps to reduce smog-forming pollution and toxic air emissions from oil and gas operations. As a result, EPA's proposed rules will provide critical protections to local communities from the current oil and gas development boom happening throughout the country. However, the proposed rules do not go far enough to protect the public health and welfare. As discussed in more detail below, we urge EPA to strengthen these rules to reduce the oil and gas

industry's substantial contribution to global warming and to provide local communities with the vital safeguards that they need from harmful air pollution.

I. New Source Performance Standards

A. Background

EPA's proposed New Source Performance Standards for the oil and natural gas industry are a long-awaited and much-needed update for a rapidly growing industry. EPA originally listed crude oil and natural gas production on the list of air pollution sources that required promulgation of new source performance standards in 1979. 44 Fed. Reg. 49,222 (Aug. 21, 1979). In 1985, EPA promulgated standards for emissions of volatile organic compounds (VOCs) and sulfur dioxide (SO_2) from natural gas processing plants, an extremely limited subset of facilities within the industry. *See* 40 C.F.R. Part 60, Subparts KKK and LLL. EPA failed to regulate other oil and gas facilities that emit substantial amounts of air pollution, such as wells, compressors, pneumatic devices, and storage tanks.

Although EPA is required to "review, and, if appropriate, revise" its new source performance standards for each regulated sector every eight years, 42 U.S.C. § 7411(b)(1)(B), it has been 26 years since EPA reviewed the oil and gas standards. Not only were the standards overly narrow from the beginning, but also much has changed in those 26 years. In particular, the improvement of hydraulic fracturing and directional and horizontal drilling techniques has changed the nature of the industry and led to the expansion of oil and gas development into new areas. The air pollution from this new development, along with emissions from existing development in established oil and gas producing regions, has substantial negative impacts to public health and the environment.

For example, numerous areas of the country with heavy concentrations of drilling are now suffering from serious ozone problems. Oil and gas development is a major source of ozone pollution in the Dallas-Fort Worth area, where many counties are violating federal standards for ozone.[1] A drilling boom has also brought serious ozone pollution problems to rural areas, such as western Wyoming and eastern Utah. In Wyoming's Upper Green River Basin, for thirteen days last winter alone residents suffered "unhealthy" ozone concentrations under EPA's current standards, including days when the ozone pollution levels exceeded the worst days of smog pollution in Los Angeles.[2] Northeastern Utah also recorded unprecedented ozone levels in the Uintah Basin in 2010 and 2011. There were numerous days when ozone levels exceeded federal standards designed to protect public health and the environment. Indeed, on many days, the levels were almost twice the federal standard.[3]

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[1] *See* Al Armendariz, Emissions from Natural Gas Production in the Barnett Shale Area and Opportunities for Cost-Effective Improvements 1, 3, 25–26 (2009).

[2] *See* Wendy Koch, *Wyoming's Smog Exceeds Los Angeles' Due to Gas Drilling*, USA Today, Mar. 9, 2011, http://content.usatoday.com/communities/greenhouse/post/2011/03/wyomings-smog-exceeds-los-angeles-due-to-gas-drilling/1; *see also* Wyo. Dep't of Envtl. Quality, Technical Support Document I for Recommended 8-hour Ozone Designation of the Upper Green River Basin vi–viii, 23–26, 94–105 (Mar. 26, 2009) ("Wyoming Nonattainment Analysis"), http://deq.state.wy.us/out/downloads/Ozone%20TSD_final_rev%203-30-09_jl.pdf.

[3] *See* Scott Streater, *Air Quality Concerns May Dictate Uintah Basin's Natural Gas Drilling Future*, N.Y. Times, Oct. 1, 2010, http://www.nytimes.com/gwire/2010/10/01/01greenwire-air-quality-concerns-may-dictate-uintah-

As oil and gas development moves into new areas, particularly as a result of rapid development of shale resources, air quality problems are likely to follow. For example, models predict that gas development in the Haynesville shale will increase ozone pollution in northeast Texas and northwest Louisiana and may lead to violations of ozone standards.[4] Experts also anticipate air quality problems associated with development of the Marcellus shale in the Mid-Atlantic Region.[5]

Concern over the environmental impacts of shale gas development, including air pollution, led President Obama in 2011 to direct the Secretary of Energy Advisory Board (SEAB) to create a subcommittee of experts to address issues related to hydraulic fracturing and make recommendations to protect public health and the environment.[6] In its first 90-Day Report, released on August 18, 2011, the SEAB Shale Gas Production Subcommittee recommended that EPA and other regulators "immediately expand efforts to reduce air emissions using proven technologies and practices."[7] The Subcommittee recommended emission standards for "both new and existing sources for methane, air toxics, ozone-forming pollutants, and other major airborne contaminants resulting from natural gas explorations, production, transportation, and distribution activities."[8] In its second 90-Day Report, released November 18, 2011, the Subcommittee recognized that EPA's proposed rules are a "critical step forward in reducing emissions of smog-forming pollutants and air toxics."[9] The Subcommittee also found, however, that the rules "fall short" because they fail to directly regulate methane emissions and fail to address pollution from existing infrastructure.[10]

B. Specific Comments on EPA's Proposal

We strongly support EPA's proposed New Source Performance Standards. In particular, we support EPA's proposal to regulate hydraulic fracturing at well sites by requiring "reduced emission" or "green" completions for fracked or refracked wells. We also support EPA's proposal to expand the rules to include controls on sources that are significant sources of air pollution but are not currently regulated, such as centrifugal and reciprocating compressors,

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basins-30342.html?pagewanted=1; EPA, AirExplorer, Query Concentrations (query "Ozone," "Uintah County," "2011"), http://www.epa.gov/cgi-bin/htmSQL/mxplorer/query_daily.hsql?msaorcountyName=countycode&msaorcountyValue=49047&poll=44201&county=49047&site=-1&msa=-1&state=-1&sy=2011&flag=Y&query=download&_debug=2&_service=data&_program=dataprog.query_daily3P_dm.sas.

[4] *See* Susan Kemball-Cook et al., *Ozone Impacts of Natural Gas development in the Haynesville Shale*, 44 Envtl. Sci. Tech. 9357, 9362 (2010).

[5] *See* Elizabeth Shogren, *Air Quality Concerns Threaten Natural Gas's Image*, Nat'l Public Radio (June 21, 2011), http://www.npr.org/2011/06/21/137197991/air-quality-concerns-threaten-natural-gas-image.

[6] The White House, Blueprint for a Secure Energy Future 13 (Mar. 30, 2011), http://www.whitehouse.gov/sites/default/files/blueprint_secure_energy_future.pdf.

[7] Sec'y of Energy Advisory Bd., Shale Gas Production Subcommittee 90-Day Report 18 (Aug. 18, 2011) (hereinafter "SEAB 90-Day Report"), http://www.shalegas.energy.gov/resources/081811_90_day_report_final.pdf.

[8] *Id.* at 16.

[9] Sec'y of Energy Advisory Bd., Shale Gas Production Subcommittee Second Ninety Day Report 5 (Nov. 18, 2011) (hereinafter "SEAB Second 90-Day Report"), http://www.shalegas.energy.gov/resources/111811_final_report.pdf.

[10] *Id.*

pneumatic devices, and storage tanks. Additionally, we support EPA's decision to tighten the standards for leak detection and sulfur dioxide emissions at natural gas processing plants.

There are, however, a number of aspects of the proposed rule that EPA must strengthen. Specifically, EPA has failed to regulate all air pollutants and sources of air pollutants from the oil and gas industry that pose a threat to public health and welfare. The proposed rule also includes loopholes that undermine the purpose of the rule. Our primary concerns are detailed below.

First, EPA must regulate methane emissions. Methane is the dominant pollutant emitted from the oil and gas industry and, as a potent greenhouse gas, poses a significant threat to public health and welfare. Yet, EPA has not proposed any control measures to directly reduce methane pollution or even attempted to justify its failure to do so. EPA's failure to address methane pollution violates Section 111 of the Clean Air Act and EPA's own longstanding practice for determining whether to regulate dangerous air pollutants, and is simply bad policy. Indeed, EPA's failure to regulate methane conflicts with the specific recommendations of the President's SEAB Shale Gas Production Subcommittee.[11]

As EPA itself explains in the proposed rule, methane emissions from the oil and gas industry contribute significantly to global warming. EPA has identified the oil and gas industry as the "single largest contributor to United States anthropogenic methane emissions."[12] The industry is responsible for over 40% of total domestic methane emissions, which amounts to 5% of all carbon dioxide equivalent (CO_2e) emissions in the country.[13]

Methane is a potent greenhouse gas that has 25 times the global warming potential of carbon dioxide over a 100-year time frame and 72 times the global warming potential of carbon dioxide over a 20-year time frame.[14] EPA has explicitly found that six greenhouse gases, including methane, constitute an air pollutant that endangers public health and welfare within the meaning of the Clean Air Act.[15] Global warming is expected to have dire consequences on human health, such as increased heat-related mortalities, spread of infectious disease, greater air and water pollution, and increased malnutrition.[16] Moreover, global warming is expected to exacerbate existing air quality problems that already impact human health, including high levels of ozone and particulate matter.[17] The impacts of global warming will be worse for the most vulnerable populations, such as those with existing health problems, children, and the elderly.[18]

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[11] SEAB Second 90-Day Report, at 4, 5; SEAB 90-Day Report, at 18.
[12] 76 Fed. Reg. 52,792 (Aug. 23, 2011).
[13] *See id.* at 52,756, 52,791–92; *see also* EPA, *Methane*, http://www.epa.gov/outreach/sources.html (last visited Nov. 28, 2011).
[14] Piers Forster et al., *Changes in Atmospheric Constituents and in Radiative Forcing, in* Climate Change 2007: The Physical Science Basis: Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change 211, 211–14 (Susan Solomon et al., eds., 2007).
[15] Endangerment and Cause or Contribute Findings for Greenhouse Gases, 74 Fed. Reg. 66,496 (Dec. 15, 2009) ("Endangerment Finding").
[16] EPA, *Climate Change – Health and Environmental Effects*, http://www.epa.gov/climatechange/effects/health.html (last visited Nov. 28, 2011).
[17] *Id.*
[18] *Id.*

Methane also reacts in the atmosphere to form ozone, which is harmful to human health and reduces crop yields.[19]

As EPA recognizes, there are numerous pollution control technologies available to reduce the substantial methane emissions from the oil and gas industry.[20] EPA has already endorsed many of these technologies through its Natural Gas STAR and Methane to Markets programs. Not only will these control technologies reduce emissions, but in many cases they will also produce profits for industry by keeping additional natural gas in the system for sale. For example, EPA estimates that industry will make $30 million annually by implementing the control technologies in the proposed rule, which EPA predicts will indirectly reduce baseline methane emissions by 26%. Moreover, according to EPA, the climate co-benefits of these methane reductions amount to as much as $1.6 billion by 2015. However, EPA's proposed rule leaves approximately 74% of the methane emissions from this industry still on the table. There are many other cost-effective control measures available to reduce these methane emissions and create substantial financial and public health benefits.

In sum, given the (1) significant methane emissions from the oil and gas industry, (2) the resulting threat to public health and welfare, and (3) the numerous available cost-effective control technologies for reducing methane emissions, there is no excuse for EPA's failure to regulate this pollutant.

Second, with the exception of refracked wells, EPA's proposed rule fails to control the substantial emissions from existing sources. Section 111(d) of the Clean Air Act requires EPA to work with the states to control emissions of pollutants like methane from existing sources. 42 U.S.C. § 7411(d). Without mandated controls on existing sources, such as compressors and pneumatic devices, these outdated devices will continue to spew unchecked pollution for years to come. For this reason, the SEAB Shale Gas Production Subcommittee specifically recommended that EPA adopt standards for existing sources.[21] Because a large amount of the pollution from existing sources can be controlled using the same or similar technologies that EPA is proposing for new and modified sources, EPA could quickly and efficiently develop and implement such standards.

Third, EPA has proposed exemptions, asked for comment on possible exemptions, or simply neglected to address emissions from a number of types of wells and other devices that emit substantial air pollution. EPA must eliminate or greatly limit these exemptions and address the unregulated sources of emissions.

For example, the proposed rule provides a blanket exemption for "wildcat" and "delineation" wells because they are not likely to be near an existing gathering line to get the recovered gas to market. Wildcat wells are the first wells drilled in a field, while delineation wells are wells drilled to determine the extent of the field. Much like producing wells, drilling and completion activities at wildcat and delineation wells emit substantial amounts of methane and VOCs, which, in many cases, could be economically captured and put to use. Indeed, the

[19] 76 Fed. Reg. 52,971; EPA, *Ground-level Ozone*, http://www.epa.gov/glo/health.html (last visited Nov. 28, 2011).
[20] 76 Fed. Reg. 52,791–92.
[21] SEAB Second 90-Day Report, at 4, 5; SEAB 90-Day Report, at 18.

State of Wyoming only allows an exemption for the very first well drilled in a field, and not for delineation wells, demonstrating that a narrower exemption is feasible.[22] Moreover, even for the first well drilled in a field, EPA should provide no exemption if the well is, in fact, near a gathering line.

Additionally, the proposed rules do not apply to oil wells, which may have substantial deposits of natural gas that are produced along with the oil. Much like gas wells, hydraulic fracturing of oil wells results in a period of "flowback" with large emissions of natural gas and VOCs. When this natural gas is flared, or burned, it results in carbon dioxide emissions, the most significant driver of global warming. This is a growing problem as a result of the rush to develop new oil shale deposits. The *New York Times* recently reported that 30% of the natural gas produced in North Dakota is simply being burned off as waste by oil companies rushing to drill oil wells in the Bakken Shale before pipelines are in place for the natural gas.[23] According to the *Times*, each day the oil companies are burning enough gas to heat half a million homes.[24] Rather than providing a blanket exemption for these wells, EPA must ensure that this waste is prevented where it is feasible to do so.

While the proposed rules will reduce pollution from fracking and refracking wells—an important step forward—they fail to address emissions from "conventional" wells where fracking is not used. These wells are left unregulated, despite the fact that liquids unloading and other well cleanup activities are the single worst source of methane emissions according to EPA's most recent greenhouse gas inventory. Because VOCs are generally co-emitted with methane, these activities are major sources of VOCs as well. Cost-effective technologies, including plunger lifts, are available to control these emissions, and investments in such measures can be recouped within a year. EPA's failure to propose standards requiring these effective and widely used measures is not consistent with EPA's obligations under the Clean Air Act.

EPA has also specifically asked for comment on whether to exclude some coal bed methane wells from the reduced emission completion requirements. There is no justification for such an exclusion. Coal bed methane wells are significant sources of methane, and reduced emission completions have been used successfully to control emissions from these wells in some areas of the country for many years.

The proposed rules allow operators to avoid using low-bleed or no-bleed pneumatic devices when their use is not "predicated"—a term EPA does not define. Because pneumatic devices are a major source of VOC and methane emissions, EPA must not undermine its own rule with a vague exception. If it is ever appropriate to waive compliance, EPA must carefully define the circumstances where it will grant a waiver, and allow members of the public to comment upon, and challenge, such exemptions.

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[22] *See, e.g.*, EPA, Oil and Natural Gas Sector: Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution: Background Technical Support Document for Proposed Standards 4–13.
[23] *See* Clifford Kraus, *In North Dakota, Flames of Wasted Gas Light the Prairie*, N.Y. Times (Sept. 26, 2011), http://www.nytimes.com/2011/09/27/business/energy-environment/in-north-dakota-wasted-natural-gas-flickers-against-the-sky.html?pagewanted=all.
[24] *See id.*

EPA must also regulate air pollution from produced water tanks and ponds. Much like storage tanks for oil and condensate, cost-effective measures are available to control emissions from produced water tanks. Indeed, Wyoming mandates 98% emission control from new produced water tanks. With respect to storage ponds, EPA should consider eliminating them altogether with a standard requiring all produced water to be kept in tanks. Such a requirement would not only reduce air emissions, but would also have significant "non-air quality health and environmental" benefits because surface spills and leaks from waste pits pose a significant threat to groundwater. At a minimum, EPA should require operators to cover all pits, as many California air districts already require.

Fourth, EPA has failed to regulate significant air pollutants emitted by the oil and gas industry, including hydrogen sulfide and particulate matter. Hydrogen sulfide is a highly toxic gas that smells like rotten eggs and can lead to neurological impairment or death at relatively low concentrations. According to EPA, there are 14 major areas found in 20 different states where hydrogen sulfide is commonly found in natural gas deposits.[25] As a result of drilling in these areas, "the potential for routine [hydrogen sulfide] emissions is significant."[26] Ultimately, hydrogen sulfide must be listed as a hazardous air pollutant under section 112 of the Act and regulated under those standards. Petitions to regulate hydrogen sulfide under section 112 are currently pending before EPA. Until hydrogen sulfide is regulated as a hazardous air pollutant, however, EPA must take action under section 111. There are numerous control technologies available for controlling hydrogen sulfide emissions from the oil and gas industry.

Particulate matter (PM_{10} and $PM_{2.5}$) has been linked to respiratory and cardiovascular problems, including aggravated asthma attacks, chronic bronchitis, decreased lung function, heart attacks, and premature death. Sensitive populations, including the elderly, children, and people with existing heart or lung problems, are most at risk from particulate matter pollution.[27] Every phase of a drilling project produces particulate matter. During road and well-pad construction, heavy equipment moving dirt and leveling the ground and vehicles traveling back and forth on access roads generate particulate matter. Drilling and completion activities also require a significant number of truck trips (e.g., trucks transporting hydraulic fracturing fluids and produced condensate and water), which generates additional particulate matter. There are numerous methods for controlling these emissions, such as using water for dust suppression, reduced speed limits, and planning to minimize road networks. Given the significant emissions and available methods of control, EPA must regulate both hydrogen sulfide and particulate matter pollution from the oil and gas sector.

Finally, with respect to the new source performance standards, EPA's analyses of control costs and cost-effectiveness, as well as the agency's cost-benefit analysis, tend to overstate costs and underestimate benefits. Correcting issues in these analyses will show that even the proposed rule has significantly lower costs, and will provide much higher benefits, than EPA concludes.

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[25] EPA, Report to Congress on Hydrogen Sulfide Air Emissions Associated with the Extraction of Oil and Natural Gas, at ii (Oct. 1993).
[26] *Id.* at III-35; *see also id.* at ii, II-5 to II-11 (listing sources of hydrogen sulfide).
[27] EPA, Proposed Rule, Regulatory Impact Analysis (RIA) at 4–19; EPA, *Particulate Matter*, http://www.epa.gov/pm/health.html (last visited Nov. 28, 2011).

In addition, in some instances a proper accounting of control costs shows that EPA could have gone further to adopt more stringent standards.

II. National Emission Standards for Hazardous Air Pollutants

A. Background

EPA originally listed oil and natural gas production as a major source of toxic air pollution in 1992 and added natural gas transmission and storage in 1998. 57 Fed. Reg. 31,576 (July 16, 1992); 63 Fed. Reg. 7155-02 (Feb. 12, 1998). In 1999, EPA first promulgated National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production and the Natural Gas Transmission and Storage source categories under section 112(d) of the Clean Air Act. 40 C.F.R. Part 63, Subparts HH and HHH; Final Rule, 64 Fed. Reg. 32,609 (June 17, 1999); Proposed Rule, 63 Fed. Reg. 6288 (Feb. 6, 1998).

Eight years after setting a section 112(d) standard, under section 112(f)(2), EPA must assess the health risk that remains with that initial standard in place and decide whether additional emission reductions are needed to reach an "acceptable" or safe level of health risk and to provide an "ample margin of safety for public health and the environment" in local communities near these sources. 42 U.S.C. § 7412(f)(2). In addition, under section 112(d)(6), EPA must review the existing section 112(d) standard and decide whether it should be updated based on new technology or emission reduction developments that have occurred since the initial standard was set and to ensure the maximum level of control now achievable. *Id.* § 7412(d)(6). Although it has now been more than 12 years since EPA set the 112(d) standard for oil and gas facilities, EPA has not assessed the remaining health risk or updated the existing standard until now. As the current review reveals, EPA must take immediate additional steps to adequately protect local communities from toxic air pollution.

Today, 57 million people live within 50 kilometers (km) of oil and gas facilities, according to EPA data. EPA's risk review shows that the oil and gas sector poses substantial cancer, chronic non-cancer, and acute health threats to people in these local communities who are exposed to toxic air pollution from these sources. However, significant emission reductions are possible from new practices, processes, and control technologies.

B. Specific Comments on EPA's Proposal

We strongly support EPA's proposed update to the National Emission Standards for Hazardous Air Pollutants, which will strengthen control of toxic air pollution from the oil and gas sector and provide local communities with long overdue health protections. We are pleased that EPA is proposing to set air toxics limits for previously uncontrolled emission points within the oil and gas sector, including small glycol dehydrators and certain storage vessels, and that EPA has proposed to remove the unlawful start-up, shut-down, and malfunction exemption from the standards. We agree with EPA's determination that the level of health risk from the oil and gas production source category is currently unacceptable, and that stronger controls are needed to provide an ample margin of safety from the natural gas transmission and storage sector. Therefore, we support the removal of the 1-ton benzene allowance for glycol dehydrators in the

entire sector. It is also important that EPA finalize the updated leak threshold (reducing the threshold to 500 parts per million (ppm) from 10,000 ppm for valves at natural gas plants). We also support EPA's proposal to require periodic monitoring, through electronic reporting, and urge EPA to ensure that those data become publicly available.

Although it is critical for EPA to finalize the new limits that it has proposed, EPA must also take additional steps to fulfill its legal duty to protect our communities from unacceptable levels of toxic air pollution and provide the ample margin of safety for public health that the Clean Air Act requires. As detailed below, the current proposed rule allows the oil and gas industry to continue to pose an unacceptable risk to public health.

First, EPA's proposed rule under both section 112(f)(2) and (d)(6) contains gaps in the pollutants, human exposures, and health risks analyzed. EPA needs to assess the health risks from all dangerous pollutants emitted by oil and gas facilities, as shown by the scientific literature, known to be part of the chemical composition of oil and gas, or detected in air monitoring conducted by community groups and others near oil and gas facilities. In particular, EPA's current assessment leaves out pollutants like the carcinogen 1,3 butadiene, the neurotoxin mercury, and many chemicals used in the hydraulic fracturing process that are listed as hazardous air pollutants.

Second, EPA's proposed rule under sections 112(f)(2) and (d)(6) contains significant gaps in the sources of emissions covered. EPA must address all significant sources of hazardous air pollutants that the current standards do not control, including wastewater pits and impoundments, well pads, well completions, and fugitive toxic air emissions. EPA must also consider the same controls for natural gas transmission and storage that it is proposing for oil and natural gas production. For example, EPA is proposing controls for storage vessels and equipment leaks in the production sector, but not for the same sources found in the transmission and storage sector (where EPA is only proposing to regulate glycol dehydrators). Although we are pleased that EPA has recognized the need to regulate previously uncontrolled sources, EPA needs to take this important opportunity to fully assess and address health risks from all emissions in this sector and remove all major gaps in the existing standard.

Third, in setting residual risk standards under section 112(f)(2), EPA must assess and then set limits to protect the most vulnerable populations living near oil and gas facilities from the health threats caused by toxic air pollution. In particular, EPA must give meaningful consideration to the health risk to children and cumulative impacts in communities that face many sources of toxic air pollution in addition to oil and gas. EPA should follow the lead of the California Office of Environmental Health Hazard Assessment by including early life vulnerability in all cancer assessments and accounting for increased prenatal susceptibility to carcinogens, and by accounting for early life vulnerability to other health risks. To address the additional health risk to children and overburdened communities, EPA should use an additional 10-fold uncertainty factor. EPA is required to ensure that its rule provides an "ample margin of safety to protect public health" for the most-exposed people, including children and overburdened local communities. 42 U.S.C. § 7412(f)(2). Yet, EPA barely mentions health in its "ample margin" analysis and focuses almost exclusively on cost considerations. EPA must correct this error by assessing the level of emissions needed to provide an "ample" margin of

safety for public health, explaining that analysis, and finalizing a rule that provides that level of protection.

Fourth, to satisfy its duty to review and update the section 112(d) standard, EPA must require greater emission reductions based on improvements in practices, processes, and technologies that have occurred in recent years, especially as the industry has changed due to shale gas and oil development and hydraulic fracturing booms. For example, California has stronger leak detection and repair standards than what EPA has proposed—specifically in the Bay Area, South Coast, and Ventura air districts. Furthermore, while local standards in California require facilities to fix leaks, EPA's standard allows 2% of equipment to leak *forever*, *no matter how much toxic air pollution goes into the air as a result*. EPA must remove this harmful loophole. Additionally, EPA should require emission limits based on available, no-emission technologies such as desiccant dehydrators, which would result in substantial emission reductions of benzene and other toxic pollutants. EPA could also set a stronger emission standard for hazardous pollutants emitted from storage tanks and dehydrators, as demonstrated by EPA's own enforcement actions at refineries, determinations of the best available control technology (BACT) in Michigan, Wyoming, and California among others, and the Natural Gas Star program. For storage tanks and dehydrators, EPA should require at least 98% to 99% efficiency control, to match what some jurisdictions already require, instead of only 95% as it proposes.

Finally, to meet its legal obligations under section 112(d) of the Act, EPA must update the maximum achievable control technology (MACT) standard based on current data and information. EPA cannot simply rely on the analysis it conducted on the control technologies evaluated in 1999, not only because its original standard was not based on the best-performing sources, but also because doing so ignores the considerable developments that have occurred since 1999. EPA must require emission reductions based on the maximum achievable level of control *today* and set a numeric limit on each toxic air pollutant emitted from the oil and gas sector. EPA must both expeditiously promulgate the vitally important standards for previously uncovered sources and update the now stale 1999 standards to remedy the deficiencies set forth above.

CONCLUSION

In conclusion, we support EPA's efforts to reduce pollution from the oil and gas industry through its proposed New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants. We commend EPA for the significant first steps it has taken and urge EPA to finalize and strengthen the proposed rules without delay. As oil and gas operations move closer to more people in more regions of the country, the health of local communities, including children and other vulnerable populations, are increasingly at risk. Putting sensible controls in place for the oil and gas industry as soon as possible will help to protect against these threats.

Thank you very much for your leadership and hard work to protect all Americans from harmful oil and gas pollution, and thank you for your careful consideration of our comments.

Sincerely,

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