

**ENVIRONMENTAL INTEGRITY PROJECT—CLEAN AIR COUNCIL
AIR ALLIANCE HOUSTON—CHESAPEAKE CLIMATE ACTION NETWORK
EARTHWORKS—ENVIRONMENT AMERICA—ENVIRONMENT TEXAS
HOOSIER ENVIRONMENTAL COUNCIL—PENNVIRONMENT
TEXAS CAMPAIGN FOR THE ENVIRONMENT**

June 11, 2020

Andrew R. Wheeler, Administrator
U.S. Environmental Protection Agency
Office of the Administrator, Mail Code 1101A
1200 Pennsylvania Avenue N.W.
Washington, D.C. 20460

Via Certified Mail and Electronic Mail (wheeler.andrew@epa.gov)

Re: Notice of Intent to Sue the Environmental Protection Agency for Failure to Perform a Nondiscretionary Duty under the Clean Air Act

Dear Administrator Wheeler:

We write on behalf of the Environmental Integrity Project, Clean Air Council, Air Alliance Houston, Chesapeake Climate Action Network, Earthworks, Environment America, Environment Texas, Hoosier Environmental Council, PennEnvironment, and Texas Campaign for the Environment (“Parties”) to provide notice of the Parties’ intent to sue the U.S. Environmental Protection Agency (EPA) for failure to review the general control device requirements for flares (“General Flare Requirements”) under the New Source Performance Standards (NSPS), 40 C.F.R. § 60.18(b)–(f), at least every eight years, as required by section 111(b) of the Clean Air Act. *See* 42 U.S.C. § 7411(b)(1)(B), (h)(1), (h)(5). On Parties’ information and belief, EPA has not conducted the statutorily mandated review of the General Flare Requirements since EPA’s initial promulgation in 1986. At the very least, EPA has not conducted this review within the last eight years.

The NSPS establish standards of performance for new or modified emission sources within certain industries that must reflect “the best system of emission reduction . . . the Administrator determines has been adequately demonstrated.” 42 U.S.C. § 7411(a)(1). Flares are pollution control devices designed to destroy the organic pollutants in waste gases, which include smog-forming compounds and carcinogens like benzene, through the combustion process. The NSPS’s General Flare Requirements, which EPA promulgated in 1986, establish certain work practices to maximize combustion efficiency and the corresponding destruction of organics in flare gas. These practices include requiring that “the net heating value of the gas being combusted” in steam- and air-assisted flares be at least 300 Btu per standard cubic foot of gas being combusted (300 Btu/scf), and limitations on “exit velocity” to avoid overwhelming the flare with more gas than it can burn efficiently. *See* 40 C.F.R. § 60.18(c)(3)(ii), (4), (5).

Not surprisingly, 34 years after their original promulgation, the General Flare Requirements no longer reflect the “best system of emission reduction.” For example, the minimum heating values required under the current rules apply to the so-called vent gas that enters the bottom of the flare. Industry studies and EPA’s own research have confirmed that

because monitoring is poor or infrequent, vent gas is often assumed to have the required heating value when it does not. And for steam- and air-assisted flares, actual heating values can be much lower in the combustion zone at the flare tip than they are in the vent gas routed to that flare, because operators often add too much steam or air during the combustion process. While steam and air addition can help to control smoking and reduce the formation of fine particulate matter, the addition of too much steam or air lowers the flare's combustion efficiency and, as a result, increases emissions significantly.

Although the General Flare Requirements do not provide for direct measurement of emissions, operators rely on the requirements to represent that their flares will achieve certain destruction efficiencies, which in turn are used to estimate emissions, determine compliance with applicable limits, and determine the flares' potential to emit. Regulated industries often assume that compliance with the General Flare Requirements will eliminate 98 percent of organic pollutants sent to the flare.¹ Based on EPA's own data and findings, however, the actual destruction efficiency can be 90 percent or even lower, which means that emissions are five or more times higher than estimated or reported by plant operators.²

EPA's failure to comply with this duty is particularly serious because the General Flare Requirements apply to many industries and are incorporated by reference in the NSPS for at least sixteen stationary sources, as detailed below. A variety of industries use flares as control devices to destroy toxic and smog-forming volatile organic compounds, but the actual destruction efficiency of these pollutants is only as good as the design and operational requirements for flares.

Section 304(a)(2) of the Clean Air Act authorizes citizen suits "against the Administrator where there is alleged a failure of the Administrator to perform any act or duty under this chapter which is not discretionary with the Administrator." 42 U.S.C. § 7604(a)(2). We hereby provide notice of the Parties' intent to file suit against EPA and you in your official capacity as Administrator of the EPA for failure to perform the nondiscretionary duties under the Clean Air Act. *See* 42 U.S.C. § 7604(b). Parties may commence this suit any time sixty days after the postmark date of this letter. *See* 40 C.F.R. § 54.2(d).

I. LEGAL REQUIREMENTS AND REGULATORY BACKGROUND

Section 111(b) of the Clean Air Act requires the Administrator to promulgate and to periodically review and revise the NSPS for each category of stationary source at least every eight years. *See* 42 U.S.C. § 7411(b). Specifically:

¹ *See, e.g.,* EPA, *Air Pollution Control Technology Fact Sheet: Flare*, No. EPA-452/F-03-019, at 1, 3 (2003), available at <https://www3.epa.gov/ttn/catc/dir1/fflare.pdf>.

² *See* Memorandum from Andrew Bouchard to EPA Docket No. EPA-HQ-OAR-2017-0357, Re: Control Option Impacts for Flares Located in the Ethylene Production Source Category 8 (March 2019) [hereinafter Ethylene Production Flare Memorandum], available at <https://www.regulations.gov/document?D=EPA-HQ-OAR-2017-0357-0017>.

The Administrator shall, at least every 8 years, review and, if appropriate, revise such standards following the procedure required by this subsection for promulgation of such standards. Notwithstanding the requirements of the previous sentence, the Administrator need not review any such standard if the Administrator determines that such review is not appropriate in light of readily available information on the efficacy of such standard.

42 U.S.C. § 7411(b)(1)(B).

Alternatively, section 111(h) allows the Administrator, where he has determined “it is not feasible to prescribe or enforce a standard of performance,” to “instead promulgate a design, equipment, work practice, or operational standard, or combination thereof, which reflects the best technological system of continuous emission reduction” *See* 42 U.S.C. § 7411(h)(1). Any such “design, equipment, work practice, or operational standard, or any combination thereof . . . shall be treated as a standard of performance,” including with respect to the eight-year review and revision deadlines of subsection (b). *See* 42 U.S.C. § 7411(h)(5).

EPA first promulgated the General Flare Requirements set forth in 40 C.F.R. § 60.18(b)–(f) in January 1986 under the “General Provisions” of 40 C.F.R. Part 60.³ EPA’s rulemaking for the General Flare Requirements began as part of a reconsideration proceeding regarding flare standards for one specific stationary source category, but “EPA also determined that the revised exit velocity limitation for flares should apply to several other standards in Parts 60 and 61.”⁴ For this reason, EPA decided to promulgate standards for flares used as control devices that would apply to multiple subparts under 40 C.F.R. Part 60 and Part 61—including, at that time, Subparts VV, NNN and Kb of 40 C.F.R. Part 60 and Subparts L and V of Part 61—“plac[ing] the flare requirements in the General Provisions of Part 60 for easy reference by all subparts in Part 60 and Part 61.”⁵ EPA based the General Flare Requirements on identical flare requirements that it promulgated in 1985 for Subpart KKK of Part 60—natural gas processing plants—and the agency simultaneously amended that subpart’s requirements to reference the General Flare Requirements instead.⁶

Since that initial promulgation of the General Flare Requirements, EPA has not conducted the statutorily mandated review under section 111(b)(1)(B), nor has the Administrator determined that “such review is not appropriate in light of readily available information on the efficacy of such standard.” 42 U.S.C. § 7411(b)(1)(B). On two occasions since 1986, EPA has amended the General Flare Requirements, but neither of these constituted the required review of

³ *See* EPA, Equipment Leaks From Synthetic Organic Chemical Manufacturing Industry; Natural Gas Processing Plants; Equipment Leaks of Benzene Flare Requirements, 51 Fed. Reg. 2,699 (Jan. 21, 1986).

⁴ *Id.* at 2,701.

⁵ *Id.*

⁶ *Id.*

the standards of performance, nor did either of the amendments take place within the last eight years.⁷

First, in 1998, EPA issued a direct final rule that amended both the General Flare Requirements and the equivalent general flare standards under the National Emission Standards for Hazardous Air Pollutants (NESHAP) to add “operating specifications for flares that contain substantial amounts of hydrogen in their waste streams.”⁸ The rule only added specifications for this flare type and did not purport to review either the General Flare Requirements or the equivalent NESHAP requirements. In EPA’s words, “[b]ecause these amendments are only adding specifications for hydrogen-fueled flares and do not otherwise alter the level of pollutant reduction required for flares used to comply with the requirements of the Clean Air Act, the EPA does not anticipate receiving adverse comments.”⁹

Second, in 2000, EPA amended the General Flare Requirements along with various other regulations under 40 C.F.R. Parts 60, 61, and 63 to make “miscellaneous editorial changes and technical corrections.”¹⁰ Within the General Flare Requirements, EPA merely made one editorial change (changing “Reference Method 22” to read “Method 22 of Appendix A to this part”) and updated two references to the ASTM Methods to include the most recent versions without deleting the previous references.¹¹ These were across-the-board technical corrections, which EPA did not represent to be a review of the standards of performance.

To date, at least sixteen subparts under 40 C.F.R. Part 60 incorporate the General Flare Requirements by reference, making the effect of EPA’s failure to review greater than the failure to review any single standard of performance:

- **Municipal solid waste landfills:**
 - Subpart Cc: 40 C.F.R. § 60.33c(c)(1);
 - Subpart Cf: 40 C.F.R. §§ 60.33f(c)(1), 60.35f(d), 60.39f(b)(4);

⁷ In addition to the two amendments to the General Flare Requirements discussed below, EPA added new subsections to 40 C.F.R. § 60.18 and 40 C.F.R. § 63.11 with regard to alternative work practices for leak detection. *See* EPA, Alternative Work Practice To Detect Leaks From Equipment, 73 Fed. Reg. 78,199 (Dec. 22, 2008). In adding these new subsections to 40 C.F.R. § 60.18, EPA did not make any review or revisions to the General Flare Requirements under subsections (b) through (f) and made clear in a newly added subsection that the alternative work practice for leak detection was separate from and did not interact with the General Flare Requirements: “This section also contains requirements for an alternative work practice used to identify leaking equipment. This alternative work practice is placed here for administrative convenience” *See id.* at 78,209; 40 C.F.R. § 60.18(a)(2). In fact, the preamble to the rule discussed only these alternative work practices for leaks and did not discuss flares at all.

⁸ EPA, Standards of Performance for New Stationary Sources: General Provisions; National Emission Standards for Hazardous Air Pollutants for Source Categories: General Provisions, 63 Fed. Reg. 24,515 (May 4, 1998).

⁹ *Id.*

¹⁰ *See* EPA, Amendments for Testing and Monitoring Provisions, 65 Fed. Reg. 61,744 (Oct. 17, 2000).

¹¹ *See id.* at 61,752.

- Subpart WWW: 40 C.F.R. §§ 60.752(b)(2)(iii)(A), 60.754(e), 60.758(b)(4);
- Subpart XXX: 40 C.F.R. §§ 60.762(b)(2)(iii)(A), 60.764(e), 60.768(b)(4);
- **Volatile organic liquid storage vessels** (Subpart Kb): 40 C.F.R. §§ 60.112b(a)(3)(ii), 60.113b(d), 60.115b(d)(1);
- **Synthetic organic chemical manufacturing industry:**
 - Equipment leaks (Subpart VV): 40 C.F.R. § 60.482-10(d);
 - Equipment leaks (Subpart VVa): 40 C.F.R. § 60.482-10a(d);
 - Air Oxidation Unit Processes (Subpart III): 40 C.F.R. § 60.612(b), 40 C.F.R. § 60.614(d);
 - Distillation Operations (Subpart NNN): 40 C.F.R. §§ 60.662(b), 60.664(d);
 - Reactor Processes (Subpart RRR): 40 C.F.R. § 60.702(b), 40 C.F.R. § 60.704(c);
- **Bulk gasoline terminals** (Subpart XX): 40 C.F.R. § 60.503(e), (f);
- **Polymer manufacturing industry** (Subpart DDD): 40 C.F.R. §§ 60.562-1(a)(1)(i)(C), 60.564(f), (g);
- **Onshore natural gas processing plants** (Subpart KKK): 40 C.F.R. § 60.633(g);
- **Petroleum refinery wastewater systems** (Subpart QQQ): 40 C.F.R. §§ 60.692-5(c), 60.695(a)(4), 60.696(c);
- **Oil and natural gas production, transmission, and distribution:**
 - Subpart OOOO: 40 C.F.R. § 60.5413(a)(1);
 - Subpart OOOOa: 40 C.F.R. §§ 60.5412a(a)(3), (d)(3), 60.5413a(a)(1), 60.5415a(b)(2)(vii).

II. THERE IS AN URGENT NEED TO UPDATE THE GENERAL FLARE REQUIREMENTS

While the statutory mandate is sufficient reason for EPA to conduct the required review of the General Flare Requirements, EPA itself has determined on multiple recent occasions that the standards are outdated for specific industry sectors, that they lead to the operation of flares with poor destruction efficiency, and that they require revision. On several of these occasions, EPA also conducted analysis of needed revisions and promulgated certain revised flare standards (outside of the General Flare Requirements), all of which are relevant to EPA's task ahead in reviewing and making needed revisions to the General Flare Requirements.

In 2012, EPA published three documents that acknowledged the shortcomings of the flare standards contained in the General Flare Requirements and the very similar NESHAP flare standards under 40 C.F.R. § 63.11. First, EPA published an Enforcement Alert regarding flaring

violations, in which the agency recognized that certain needed parameters affecting the efficiency of flares are not captured within current standards, including maintaining the appropriate steam-to-vent-gas ratio and ensuring that the heating value of combustion zone gas is high enough to maximize combustion efficiency.¹² The Alert stated that the heating value in the combustion zone gas “is a better indicator of efficiency than the heating value of the Vent Gas alone.”¹³ The General Flare Requirements notably do not include either of these additional parameters.

Second, in a March 2012 rulemaking proposing certain national uniform emission standards under NESHAP, EPA declined to update the similar NESHAP flare standards under 40 C.F.R. § 63.11 at that time, but stated that it was “continuing to gather data, review flare research papers and test reports, and investigate operating conditions that may influence the performance of a flare, including situations of over steaming, excess aeration, flame lift off, and high winds,” and that EPA “may in the future propose to add new flare requirements” based on this information.¹⁴

Third, following on the uniform emission standards rulemaking, EPA published a report in April 2012 entitled “Parameters for Properly Designed and Operated Flares.”¹⁵ Among other findings, EPA noted in particular that reliance on the net heating value of the vent gas—the parameter the General Flare Requirements use—“as an indicator of good combustion ignores any effect of steaming. Therefore, to incorporate steaming, a net heating value of the combustion zone gas was calculated to include the assist steam.”¹⁶ In fact, EPA later used this study in support of its promulgation of more stringent NESHAP standards applicable to flares at petroleum refineries under 40 C.F.R. § 63.670, as discussed below.

More recently, EPA has conducted two rulemakings that not only point out the shortcomings of the current standards—with respect to the nearly identical NESHAP general flare standards—but set out specific NESHAP revisions for certain source categories to correct these shortcomings.

In March 2020, EPA finalized revisions to NESHAP standards for ethylene production facilities, including revised flare standards more stringent than the general NESHAP flare

¹² See EPA, *EPA Enforcement Targets Flaring Efficiency Violations*, Enforcement Alert, Aug. 2012 [hereinafter EPA Enforcement Alert], available at <https://www.epa.gov/sites/production/files/documents/flaringviolations.pdf>.

¹³ *Id.* at 2.

¹⁴ See EPA, National Uniform Emission Standards for Storage Vessel and Transfer Operations, Equipment Leaks, and Closed Vent Systems and Control Devices; and Revisions to the National Uniform Emission Standards General Provisions, 77 Fed. Reg. 17,898, 17,905 (March 26, 2012).

¹⁵ See EPA Office of Air Quality Planning and Standards, *Parameters for Properly Designed and Operated Flares* (April 2012), available at <https://www3.epa.gov/airtoxics/flare/2012flaretechreport.pdf>.

¹⁶ See *id.* at 3-32.

standards at 40 C.F.R. § 63.11.¹⁷ In a memorandum supporting the rulemaking, EPA asserted that ethylene production facility flares complying only with the general NESHAP flare standards are not achieving 98-percent destruction efficiency. Rather, EPA estimated that “the baseline level of control for all ethylene flares in the source category would fall on average somewhere between 86.6 percent and 94.2 percent”—or 90.4 percent, as “an average of these two numbers.”¹⁸

EPA also identified three primary factors that negatively impact flare performance:

- (1) the flow of vent gas to the flare;
- (2) the amount of assist media (e.g., steam or air) added to the flare; and
- (3) the combustibility of the vent gas/assist media mixture in the combustion zone (i.e., the net heating value in the combustion zone).¹⁹

In finalizing the revised operational and monitoring requirements that would address these factors at ethylene production facilities, EPA estimated that the revised flare standard have potential “excess emissions reductions of 1,430 tpy HAP and 13,020 tpy VOC.”²⁰ EPA based these estimates on the new standards applying to approximately 102 existing flares in that source category.²¹

In December 2015, EPA promulgated final NESHAP standards applicable to petroleum refineries. *See* 40 C.F.R. § 63.670. Similar to the new standards for ethylene production facilities, EPA implemented more detailed and specific revised requirements than the general NESHAP flare standards under 40 C.F.R. § 63.11 to ensure better combustion efficiency for petroleum refinery flares.²²

Among other improvements, the revised NESHAP standards for petroleum refineries set certain operational and monitoring requirements for flares that are an improvement over the provisions of the General Flare Requirements. One of the most notable improvements is that

¹⁷ *See* EPA, National Emission Standards for Hazardous Air Pollutants: Generic Maximum Achievable Control Technology Standards Residual Risk and Technology Review for Ethylene Production (March 2020) [hereinafter Ethylene Production NESHAP Rule], *available at* <https://www.epa.gov/stationary-sources-air-pollution/final-amendments-air-toxics-standards-ethylene-production-risk-and>.

¹⁸ *See* Ethylene Production Flare Memorandum, *supra*, at 8.

¹⁹ *Id.* at 2-3.

²⁰ *See* Ethylene Production NESHAP Rule, *supra*, at 103.

²¹ *See* EPA, National Emission Standards for Hazardous Air Pollutants: Generic Maximum Achievable Control Technology Standards Residual Risk and Technology Review for Ethylene Production, 84 Fed. Reg. 54,278, 54,301 (Oct. 9, 2019).

²² *See* EPA, Petroleum Refinery Sector Risk and Technology Review and New Source Performance Standards, 80 Fed. Reg. 75,178, 75,189 (Dec. 1, 2015) (“We agree with the commenters that studies have shown that many refinery flares are operating less efficiently than 98 percent. . . . Thus, we proposed, and are finalizing, revisions to the flare operating requirements to ensure that the flares meet the required performance level.”).

refinery flares must maintain a minimum net heating value of the flare combustion zone gas over a 15-minute block period. This is a particularly important requirement, as the shorter averaging time reduces the degree to which flares depart from the minimum net heating value, and measurement of the net heating value at the combustion zone incorporates assist steam or pre-mix assist air flow into the calculation, limiting the potential for over-assist and over-steaming. *See* 40 C.F.R. § 63.670(e), (m). Additionally, operators must continuously measure and record the flow rate of all gas streams being flared, as well as any assist steam or air. *See* 40 C.F.R. § 63.670(i). Operators must also continuously monitor the pilot flame to ensure its presence at all times the flare is in use, with every 15-minute block with at least a one-minute outage constituting a separate violation. *See* 40 C.F.R. § 63.670(b), (g). This clarity is vital to the standards' effectiveness and enforceability.

None of these requirements are found in the General Flare Requirements. The revised NESHAP flare requirements for petroleum refineries and ethylene production facilities demonstrate that there is a need to update and improve monitoring and work practice requirements for all regulated flares to ensure destruction efficiency, reduce emissions, and provide for more accurate emissions accounting. Moreover, these rulemakings clearly establish that such improvements are achievable. These updates can increase industry compliance, reporting accuracy, and flare destruction efficiencies, while at the same time reduce emissions and improve air quality and public health.

III. PARTIES GIVING NOTICE

The names, addresses, and telephone numbers of Parties giving notice are:

Environmental Integrity Project 1000 Vermont Ave. NW Suite 1100 Washington, DC 20005 (202) 296-8800	Clean Air Council 135 S. 19th Street Suite 300 Philadelphia, PA 19103 (215) 567-4004	Air Alliance Houston 2520 Caroline Suite 100 Houston, TX 77004 (713) 528-3779
Chesapeake Climate Action Network 6930 Carroll Ave, Suite 720 Takoma Park, MD 20912 (240) 396-1981	Earthworks 1612 K St. NW Suite 904 Washington, DC 20006 (202) 887-1872	Environment America 1543 Wazee St. Suite 410 Denver, CO 80202 (303) 801-0581
Environment America d/b/a Environment Texas 200 East 30th Street Austin, TX 78705 (512) 479-0388	Hoosier Environmental Council 3951 N. Meridian, Suite 100 Indianapolis, IN 46208 (317) 685-8800	PennEnvironment 1429 Walnut Street Suite 1100 Philadelphia, PA 19102 (215) 732-5897

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Adam Kron is the counsel representing the Environmental Integrity Project, Air Alliance Houston, Chesapeake Climate Action Network, Earthworks, Environment America, Environment Texas, Hoosier Environmental Council, PennEnvironment, and Texas Campaign for the Environment, with contact information provided in the signature block below. Joseph Otis Minott, Alexander G. Bomstein, and Kathryn L. Urbanowicz are the attorneys representing Clean Air Council, with contact information provided in the signature block below.

IV. CONCLUSION

Section 111(b) of the Clean Air Act requires the Administrator to promulgate and to periodically review and revise the NSPS at least every eight years. *See* 42 U.S.C. § 7411(b)(1)(B). This statutory duty to review applies to the General Flare Requirements as “design, equipment, work practice, or operational standard[s]” under section 111(h). *See* 42 U.S.C. § 7411(h)(1), (5). Alternatively, the duty applies to the General Flare Requirements through their incorporation as standards of performance for at least sixteen separate subparts under 40 C.F.R. Part 60.

As provided above, it is on Parties’ information and belief that the Administrator has made no such review of the General Flare Requirements since their original promulgation in 1986. At the very least, the Administrator has conducted no such review within the last eight years, as required by section 111(b) of the Clean Air Act. Furthermore, the Administrator has not made the alternative determination that “such review is not appropriate in light of readily available information on the efficacy of such standard.” *See* 42 U.S.C. § 7411(b)(1)(B). For these reasons, EPA has failed to perform a nondiscretionary act or duty. *See* 42 U.S.C. § 7604(a).

Parties may commence a citizen suit to compel EPA to perform any or all of the above acts or duties at any time beginning sixty days from the postmark date of this letter, which is June 11, 2020. *See* 42 U.S.C. § 7604(a); 40 C.F.R. § 54.2(d). If EPA fails to cure its noncompliance with these statutory mandates, Parties intend to file suit in the U.S. District Court for the District of Columbia, seeking declaratory relief, injunctive relief, and litigation costs, as appropriate.

If you have any questions regarding the allegations in this notice or believe any of the foregoing information may be in error, please do not hesitate to contact us using the contact information listed below. Parties would also welcome an opportunity to discuss a resolution of this matter prior to expiration of the notice period if you are prepared to remedy the violations discussed above.

Thank you for your prompt attention to this matter.

Respectfully submitted,



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