American
Fuel & Petrochemical
Manufacturers

American
Petroleum
Institute

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Re: Petition to Prohibit the use of Hydrogen Fluoride in Domestic Oil Refining Under Sections 21 and 6(a) of the Toxic Substances Control Act

On February 11, 2025, Clean Air Council, Communities for a Better Environment, and the Natural Resources Defense Council (collectively, "Petitioners") submitted a document titled "Petition To Prohibit The Use Of Hydrogen Fluoride In Domestic Oil Refining Under Sections 21 And 6(A) Of The Toxic Substances Control Act" ("the Petition"). The American Fuel & Petrochemical Manufacturers, together with and the American Petroleum Institute (collectively "AFPM/API"), oppose the Petition because it is legally and factually flawed.

AFPM/API submit the following comments in opposition to the Petition. AFPM/API intend to supplement these comments with additional detail in the coming weeks, but, in the meantime, please contact us if you have any questions or require specific information.

Respectfully submitted,

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Comments of American Fuel & Petrochemical Manufacturers (AFPM) and American Petroleum Institute (API) on Petition to Prohibit the use of Hydrogen Fluoride in Domestic Oil Refining Under Sections 21 and 6(a) of the Toxic Substances Control Act

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I. Introduction

AFPM/API oppose the Petition as factually and legally flawed. Petitioners assert that, based on the information provided in the Petition, the Environmental Protection Agency (EPA) must "establish a Section 6(a) rule prohibiting the use of HF [hydrogen fluoride/hydrofluoric acid] in domestic oil refining," which it defines to include transport of HF to refineries. Alkylation units in refineries produce alkylate, a necessary blending component for cleaner, high-octane gasoline and aviation fuel. The alkylation process is initiated by one of two primary catalysts — HF or sulfuric acid. It is this use of HF that Petitioners seek to ban.[1]

HF is one of the most thoroughly managed and highly regulated industrial chemicals in use today. Facilities that have and use HF are subject to federal and state workplace and community safety requirements. For example, under the Occupational Safety and Health Administration's (OSHA) regulations, HF is subject to the Process Safety Management of Highly Hazardous Chemicals (PSM) standard. Under the Clean Air Act (CAA), EPA also requires facilities that use or store more than a threshold amount of HF to develop risk management plans pursuant to the Risk Management Program (RMP) requirements. HF is also subject to the Emergency Planning and Community Right-to-know Act (EPCRA). Collectively, these programs work to prevent and manage accidental releases, but they also establish rapid response protocols and emergency mobilization plans, specific to each site and community, that can be initiated in the rare event of a chemical release. Under RMP and PSM, in particular, facilities that utilize or store above-threshold quantities of HF must complete hazard assessments and update them at least every five years. These facilities are required to adhere to a series of risk reduction measures, including process hazard analyses that entail a review of internal and external incidents to identify preventative measures and mitigations to prevent similar events. Before starting equipment operation, sites are required to conduct a pre-start-up review and maintain the process safety information for the unit. If an incident does occur, there are incident investigation requirements that inform future hazard assessments and programs. Facilities are regularly audited under the PSM and RMP regulations to verify the effectiveness of those programs. Training for employees is also a requirement. There are extensive requirements for emergency response planning as well. These elements work together to adequately reduce risk at these facilities.

As part of OSHA's PSM and EPA's RMP regulations, facilities review industry codes, standards and recommended practices to determine the Recommended and Generally Acceptable Guidelines for Engineering Practices (RAGAGEP) they will incorporate into their safety programs. The API Recommended Practice, *Safe Operation of Hydrofluoric Acid Alkylation Units*, (API RP-751) contains a menu of options that the refining industry evaluates as they

[1] Globally, refineries use only 2% of the total amount of HF consumed. There are many other uses of HF that are not addressed in the Petition.
https://www.afpm.org/sites/default/files/issue_resources/Alkylation_SafetyRiskMitigation.pdf.

create facility-specific safety programs.[2] Facilities in the refining industry must also evaluate multiple incident scenarios of different scales to consider every possible risk factor and multiplier for emergency response planning and procedures.

Petitioners ignore the existing and fulsome protections of the CAA, Occupational Safety and Health Act (OSH Act), PSM, EPCRA, Hazardous Materials Transportation Act, and other federal and state regulations, as well API RP-751 and other safety measures implemented by refineries, to argue that regulation under TSCA is warranted. In reality, this safety regime combined with a robust industry information sharing program has resulted in the petrochemical manufacturing and fuel refining industries being able to claim they are among the safest U.S. manufacturing industries, according to injury and illness rates maintained by OSHA and the U.S. Bureau of Labor Statistics covering all the major U.S. manufacturing sectors.[3] The effectiveness of the existing regulatory system at eliminating unreasonable risk is further corroborated by the fact that nationally, there have never been any fatalities in surrounding communities as a result of HF-related incidents at refineries.[4] Because current regulatory requirements adequately mitigate potential risks from HF alkylation, the Petition should be denied.

In addition to ignoring the protections provided by other laws and regulations, Petitioners inappropriately rely on worst-case assumptions and hypothetical scenarios to portray the transportation and use of HF in refineries as posing unreasonable risks. However, the alleged risks to which Petitioners point are based on scenarios and assumptions that are highly improbable in the real world. Because these scenarios are so speculative, they do not qualify as part of a "condition of use" that may lawfully be regulated under TSCA. EPA has publicly stated that it "does not include in the scope of the risk evaluation [the TSCA Section 6 process prerequisite for determining the presence of an unreasonable risk requiring regulation under TSCA Section 6(a)] catastrophic accidents, extreme weather events, and other natural disasters."[5] As such, they are irrelevant to assessing whether HF presents an unreasonable risk under TSCA Section 6, as urged by Petitioners.

Furthermore, even if the extremely rare, highly speculative scenarios posited by Petitioners could be considered "conditions of use" for purposes of TSCA, Petitioners have failed to demonstrate that those scenarios represent an "unreasonable risk," which is a necessary predicate for EPA to act under Section 6(a) to impose a ban or any other risk management measure.

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[2] The latest version of API RP-751 can be accessed at the following url: https://www.api.org/products-and-services/standards/important-standards-announcements/751.

[3] See Bureau of Labor Statistics (BLS) data on "incidence rates of nonfatal occupational injuries and illnesses by industry," available at https://www.bls.gov/charts/injuries-and-illnesses/number-and-rate-of-nonfatal-work-injuries-by-industry-subsector.htm.

[4] https://www.afpm.org/sites/default/files/issue_resources/Alkylation_SafetyRiskMitigation.pdf).

[5] See Draft Scope of the Risk Evaluation for Vinyl Chloride. p. 17.

Finally, if EPA ignored the applicability of other laws, found that speculative HF releases qualify as part of the refinery alkylation condition of use, and found that such use poses unreasonable risk, then EPA still could not lawfully grant the relief requested by the Petition but would, instead, need to thoroughly evaluate the risks of HF as well as the risks, benefits and costs of any other available mitigation options, as required by TSCA.

II. Petitioners Have Not Demonstrated That Use of HF In Refineries Presents An Unreasonable Risk To Human Health Or The Environment.

A. Petitioners Have Not Conducted An Adequate Exposure Assessment To Demonstrate Unreasonable Risk.

Under Section 6 of TSCA, the conditions of use of a chemical must be evaluated to determine whether a use presents "unreasonable risk of injury to health or the environment." Only a determination of unreasonable risk triggers some form of TSCA-specified risk management regulation.

As set forth at 40 C.F.R. § 702.39(a), an assessment of whether a substance presents an unreasonable risk must include several components, including an exposure assessment. EPA's risk assessment guidance explains that to perform an adequate exposure assessment, "exposures are estimated (usually quantitatively) for the identified conditions of use" based on a consideration of the "***likely*** duration, intensity, frequency, and number of exposures under the conditions of use."[6] In addition, a valid exposure assessment should take into account "variability in exposures and appropriate exposure distributions" using probabilistic tools such as Monte Carlo and kriging.[7]

As discussed in Section III below, the exposure scenarios pointed to by Petitioners as posing unreasonable risk are highly speculative and unlikely. Moreover, because they are based entirely on hypothetical accidental releases, they are inherently highly variable. Under these circumstances, as EPA's risk assessment guidance indicates, probabilistic assessment is necessary to ascertain the "likely duration, intensity, frequency, and number" of exposures, as mandated by TSCA Section 6. However, Petitioners have not attempted to conduct a probabilistic analysis of potential exposures. Instead, they assume, contrary to the facts, that catastrophic releases are likely to occur with some frequency, and that those releases will result in massive casualties. These speculative assumptions are not a substitute for a science-based

[6] EPA, Guidance to Assist Interested Persons in Developing and Submitting Draft Risk Evaluations Under The Toxic Substances Control Act, EPA 740-R17-001 (June 2017) at p 17 (emphasis added); available at: https://www.epa.gov/sites/default/files/2017-06/documents/tsca_ra_guidance_final.pdf.

[7] EPA, Framework for Human Health Risk Assessment to Inform Decision Making, EPA/100/R-14/001 (April 2014) at p 40-41; available at: https://www.epa.gov/sites/default/files/2014-12/documents/hhra-framework-final-2014.pdf.

probabilistic exposure assessment. And without such an exposure assessment, Petitioners have not and cannot establish that the use of HF in refineries presents an unreasonable risk.

B. Available Data Do Not Support Petitioners' Speculative Exposure Assumptions.

Petitioners have not demonstrated that alkylation using HF or transportation of HF to refineries presents any unreasonable risks. Petitioners couple the presentation of toxicity data with intentionally biased figures, assumptions, and projections regarding exposure, assuming there would be such a release and assuming unrealistic exposures if there were a release, but they do not factor in the exceedingly low likelihood of release and existing risk mitigation measures, as discussed below in Section III.B. Moreover, the available data indicate that if a release were to occur, it would not result in the level of exposure and type of injury hypothesized by Petitioners. In the nearly 80-year history of HF alkylation at fuel refineries, there have been no fatalities caused by HF in the communities surrounding AFPM/API member refineries.[8] Based on data from the National Safety Council, actual incident reports and mitigation surveys, the theoretical lifetime odds of sustaining a life-threatening injury from HF alkylation in the United States are roughly 1 in 52 million.[9] For those living in close proximity to refinery HF units, the odds of life-threatening injury from HF are just 1 in 144,000.[10] By comparison, the lifetime odds of dying from a bee sting are much greater at 1 in 59,000, and the chance of being struck by lightning, the quintessential low-probability occurrence, is also greater, at 1 in 138,000.[11]

Petitioners have similarly overstated the likely harm from an HF release. First, API RP-751, discussed above includes emergency response measures in the case of an HF release, including HF-specific training for emergency response teams and plans covering protocols for coordinating with local first responders, internal and external communications systems, decision criteria to issue evacuation or shelter-in-place instructions, medical responses to HF exposure, strategies for managing potential mitigation water runoff, and mechanisms for decontaminating both the built and natural environments (e.g. equipment, buildings, soil and water). Many of these mitigation measures are already required by the RMPs administered by EPA, and their preparation is legally enforceable.

Petitioners' consequence analysis is extrapolated from the RMP worst-case scenario data; however, this consequence analysis is a misuse of these data, as EPA expressly disclaimed its use for such purposes. EPA stated when discussing RMPs, "the results you obtain from modeling

[8] https://www.afpm.org/sites/default/files/issue_resources/Alkylation_SafetyRiskMitigation.pdf.
[9] *Id.*
[10] *Id.*
[11] *See* Attachment 1.

your worst-case or alternative scenarios should not be considered to predict the likely results of an accidental release."[12]

Rather, the RMP planning circles relied upon by Petitioners are hypotheticals that have never been replicated in the real world. They are intended solely for emergency response planning purposes, and they should not be misinterpreted or misrepresented as predictors of actual risk. Moreover, the modeling used for RMPs "should be viewed as providing a basis for discussion among the regulated community, emergency planners and responders, and the public, rather than predictions."[13] Thus, RMP data cannot be used as "predictions" for outcomes of actual releases. Yet, Petitioners fail to mention these EPA disclaimers and instead base their exposure claims on information the EPA considers unrealistic and invalid for establishing actual consequences for these scenarios.

It is easy to see why these "planning circles" are not predictors of actual exposure or risk. They are designed to identify the largest possible area that could be impacted by a hypothetical worst-case scenario. Multiple unrealistic assumptions are baked into these hypothetical scenarios. First, most there are zero active mitigation technologies that will be deployed in response to an incident.[14] In addition, the worst-case scenarios do not factor in the use of all passive mitigation measures. This means that such calculations cannot consider "automatic shutoff valves, rapid transfer systems (emergency drainage), and water/chemical sprays," which "have the effect of reducing either the release rate or the duration of the release, or both."[15] A release without such mitigation measures will simply never be the case in the United States because every refinery with an HF alkylation unit is equipped with multiple forms of mitigation, none of which is "single point-of-failure," or the only line of defense for a facility or community. Second, to arrive at a hypothetical worst-case scenario, facilities are required to factor in the worst plausible external conditions for an incident and to proceed as though all those conditions will exist simultaneously during an incident. Such a scenario is not just unlikely; it is not physically possible. For example, the RMP uses both the nighttime wind stability and the highest-observed ambient temperature (a daytime reading). These nighttime and daytime assumptions can never happen simultaneously in the real world, so the worst possible real-world release scenario would still never match the RMP. Third, the RMP shows what would happen if an incident occurred while wind was blowing steadily in all directions. Such an assumption would effectively mean that wind was steadily emanating from the refinery in all directions. This assumption would cause the neat "planning circles," rather than much smaller, and realistic, pie-

[12] See General Guidance on Risk Management Programs for Chemical Accident Prevention (40 CFR Part 68) - CHAPTER 4: OFFSITE CONSEQUENCE ANALYSIS (April 2004) EPA also states "[t]he distance to the endpoint estimated under worst-case conditions should not be considered a zone in which the public would likely be in danger."

[13] General Guidance on Risk Management Programs for Chemical Accident Prevention (40 CFR Part 68) - CHAPTER 4: OFFSITE CONSEQUENCE ANALYSIS (April 2004) at 4-4.

[14] 40 CFR 68.165(b)(14).

[15] https://www.epa.gov/sites/default/files/2013-11/documents/chap-04-final.pdf.

shaped wedges or plumes. In reality, if a release were to occur at a facility, the majority of that circle would not be impacted, and the area impacted would depend on actual wind speed and direction, humidity, and turbulence.

RMP worst-case scenarios include other unrealistic assumptions, such as assuming that the entire contents of a tank are completely released in 10 minutes. Such an assumption is particularly unrealistic because a leak from an atmospheric storage tank of HF will not have a strong motive force driving the HF out of the vessel. In addition, these assumptions do not account for physical structures and barriers that limit the offsite consequences of any release.

Because all of Petitioners' calculations and assertions regarding exposure and, therefore, risk are based on the RMPs, they are just as exaggerated and flawed. The faults in these calculations are illustrated by the disparity between the few release incidents that have occurred and the dire predictions by Petitioners. For example, the 2019 Philadelphia incident does not appear to have resulted in any injury from the HF itself. Specifically, the six minor injuries to workers and first responders Petitioners referenced do not appear to have been caused by HF exposure. Relatedly, modeling by the Federal Emergency Management Agency "concluded that 'significant HF [concentrations] was *unlikely to have crossed the facility perimeter* [as a result of the incident]'" and "'HF concentrations outside the facility perimeter [as a result of the incident] were low, on the order of a few parts per billion (ppb) or below ..... These levels are considerably *below generally accepted health hazards for HF*.'" In fact, "[t]he CSB is unaware of any off-site impacts from the HF release" in Philadelphia.[16] Yet, when Petitioners calculate the area and number of people that could be impacted by a release from the nearby Trainer Refinery, they argue that the HF could travel 17 miles, exposing 1,900,000 people. This is an impossible result, since, as explained above, such figures, derived from RMP planning circles, are simply unrepresentative of real-world exposure, weather patterns, operating conditions, and potential injury. Also of note, Petitioners did not provide the equivalent calculation for the Texas City facility, but the 1987 incident at that plant, nearly 40 years ago, resulted in the hospitalization of 95 people and alleged wildlife impacts for three miles, a far cry from what their calculations provided in the Petition, would have predicted -- a minimum of 6.2 miles affecting a minimum of 400,000 people in the area. Petition at 20. The rare instances of real world HF releases have been nothing like the scope and magnitude of releases predicted in the Petition. In the many decades that refineries have used HF alkylation in the U.S., there has never been an HF alkylation release at a U.S. refinery of the type described in the Petition.

Thus, Petitioners' reliance on RMP models to predict exposures, in contravention of EPA recommendations not to rely on such modeling,[17] is misplaced and inappropriate for TSCA

[16] https://www.csb.gov/assets/1/6/pes_final_report_published_october_2022.pdf at 24.

[17] "Since worst-case scenario distances are based on modeling conditions that are unlikely to occur, and since modeling of any scenario that results in large distances is very uncertain, EPA strongly urges communities and industry not to rely on the results of worst-case modeling or any modeling that results in very large toxic endpoint

purposes (not reasonably foreseen or likely) and cannot be used to support a conclusion of "unreasonable risk."

C. Any Potential Risk Is Adequately Mitigated Under Existing Regulations

As discussed elsewhere in this document, potential risks from HF alkylation at refineries are comprehensively addressed and thoroughly mitigated under existing regulatory programs including RMP and PSM as well as consensus RAGAGEP standards, most notably API RP-751.[18] In addition, potential risks from transportation and occupational exposures are further mitigated by extensive OSHA and DOT regulations. For example, refineries handling HF must comply with OSHA requirements that include the following:

- Develop and implement a process safety management program in accordance with OSHA standard at 29 CFR 1910.119, if they meet threshold quantities.
- Implement a program of engineering controls, work practices and personal protective equipment to control exposure (*see, e.g.,* 29 CFR 1910.134, 29 CFR 1910.1000);
- Monitor the site to determine the appropriate level of employee respiratory protection and provide suitable respirators where required (29 CFR 1910.134);
- Provide information and training, including first-aid training, to employees with respect to potential hazards of HF at their facilities by implementing a written hazard communication program (29 CFR 1910.1200);
- Develop and implement an emergency response plan, including emergency procedures and training of personnel (*see, e.g.,* 29 CFR 1910.120, 29 CFR 1910.38); and
- Provide adequately trained first aid responders (29 CFR 1910.151).

All refineries with HF alkylation units are required to comply with these regulations, and, although the Petitioners chose to ignore them, they are relevant to the question of whether HF alkylation poses an unreasonable risk under TSCA. EPA must consider these existing requirements that help ensure that HF alkylation units do not pose an unreasonable risk.

Similarly, as indicated previously, the potential risk of HF exposure in transportation is thoroughly and appropriately regulated by the DOT. PHMSA has adopted comprehensive

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distances in emergency planning and response activities." -- Source: https://www.epa.gov/sites/default/files/2013-11/documents/oca-chps.pdf, Sec. 1.4.

[18] *See, e.g.,* discussion of RMP, PSM and API RP-751 in Section III.B, *supra.*

regulations governing HF transportation. *See* PHMSA's Hazardous Materials Regulations (HMR) 49 CFR Subtitle B Chapter I Subchapter C Parts 100-185. HF is subject to numerous requirements governing its transportation, including package selection, shipping papers, marking, labeling, and other operational controls. *See* 49 CFR Sec. 172.101.

As discussed, above, most, if not all, U.S. refineries receive HF by truck. The HMR comprehensively regulates HF truck transportation, requiring shippers to use specific performance-oriented packaging (e.g., MC 307 or low-pressure chemical ISO containers) that have undergone extensive testing and periodic requalification to ensure they minimize exposure while in transportation. PHMSA regulations also cover loading and unloading, as well as appropriate hazard communication through regulations governing the proper shipping name, required hazard warning labels, and markings to ensure that the risks of HF are appropriately communicated. These requirements combine to appropriately address the risks of transporting HF by truck.

Although we are not aware of any U.S. refineries that receive HF by rail, the HMR covers those movements as well, requiring specific tank car construction and safety standards, including steel thickness and enhanced safety features, specific valves and valve protection, periodic requalification, loading and unloading requirements, and operational controls (including routing, speed restrictions, and security controls). Regulations related to tank car requirements were recently updated in 2020 to further strengthen the standards for rail tank cars moving HF.

The comprehensive management of potential risks under multiple coordinated regulatory programs governing the use of HF at refineries and the transportation of HF to those facilities ensures that there is no unreasonable risk associated with those conditions of use.

III. The Exposure Scenarios Described By Petitioners Do Not Constitute Conditions Of Use Under TSCA.

Although "the use of HF for alkylation at U.S. refineries" and, separately, transportation of HF are conditions of use of HF, Petitioners are incorrect to treat unlikely, unpredictable, hypothetical releases as part of those conditions of use, subject to risk evaluation and risk management under TSCA Section 6. Moreover, use of HF in a refinery is a separate condition of use from its transportation to such refineries, and transportation to refineries does not utilize rail transport as Petitioners allege.

A. "Conditions of Use" Do Not Include Unlikely Events, Such As Random And Hypothetical Accidents.

The risk scenarios relied on by Petitioners are grossly misleading and are not, in fact, part of HF's "conditions of use," as defined by TSCA, so EPA cannot impose Petitioner's sought after ban under TSCA Section 6. EPA can only promulgate a ban, or any other restriction under Section 6(a), if it first determines that "a chemical substance presents an unreasonable risk of

injury to health or the environment . . . under the conditions of use." 15 U.S.C. § 2605(b)(4)(A). "Conditions of use" means "the circumstances, as determined by the Administrator, under which a chemical substance is *intended, known, or reasonably foreseen* to be manufactured, processed, distributed in commerce, used, or disposed of." 15 U.S.C. § 2602(4) (emphasis added). As EPA has explained with respect to the identification of conditions of use under TSCA Section 6, "[t]he determination of whether a particular circumstance is known or reasonably foreseen - and therefore an exposure that must be considered within the scope of the risk evaluation - is necessarily going to be a fact-specific, chemical-by-chemical analysis."[19] When responding to comments suggesting that EPA should include in its evaluations "exposures from chemical spills as conditions of use" and should factor in "spills [and] leaks," EPA responded that:

> where EPA has reasonably available information demonstrating that certain exposures associated with a spill or leak are known or reasonably foreseen to occur (e.g., regular or predictable exposures from equipment leaks as part of the manufacturing process), EPA would expect to include that exposure within the scope of the risk evaluation. Conversely, *where exposures from future releases of a chemical substance are unsubstantiated, speculative, or otherwise not likely to occur (e.g., a future one-time accident involving the chemical substance that could be caused by an atypical one-time set of circumstances), EPA would generally not assess them as part of a risk evaluation.*[20]

Thus, "conditions of use" that may be evaluated and regulated under TSCA Section 6 exclude releases that are speculative or not likely to occur, such as hypothetical releases from rare accidents caused by an atypical, one-time set of circumstances, because such releases are not reasonably foreseen. TSCA does not permit consideration of, or regulation based on, unlikely scenarios.

B. Catastrophic Release From A Refinery Is Not Reasonably Foreseen.

"The storage, use, recycling, and any mixing or blending of HF for alkylation at U.S. oil refineries are 'conditions of use' of HF." Petition at 3. On that Petitioners and AFPM/API agree. However, these conditions of use do not include the hypothetical catastrophic releases upon which Petitioners base their Petition. The Petition does not look at intended use of HF and equipment maintenance or "regular or predictable exposures from equipment leaks as part of the manufacturing process"[21]; instead, it refers only to risks from highly unlikely and speculative catastrophic releases that might hypothetically result from plant failures and mass HF releases from refineries.

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[19] USEPA, Procedures for Chemical Risk Evaluation Under the Toxic Substances Control Act (TSCA) EPA-HQ-OPPT-2023-0496 -- EPA Response to Public Comments (April 2024) at p. 14, *available at:* https://www.regulations.gov/document/EPA-HQ-OPPT-2023-0496-0431.

[20] *Id.* (emphasis added).

[21] https://www.regulations.gov/document/EPA-HQ-OPPT-2023-0496-0431.

The plant failures and mass HF releases posited by Petitioners are "unsubstantiated, speculative or otherwise not likely to occur (e.g., a future one-time accident involving the chemical substance that could be caused by an atypical one-time set of circumstances),"[22] and, thus, such releases do not qualify as part of a "condition of use" for purposes of TSCA Section 6. First, the industry has used HF alkylation for decades and takes multiple, redundant measures to use HF safely and mitigate the risk of release. Refineries using HF conduct risk assessments that measure the probability of various realistic release scenarios. Facilities then implement the appropriate mitigations to prevent or minimize the impact of those releases. The risk of a release is managed at the facility level and at the process unit itself. Petitioners have been able to point to only two HF releases in the United States in the last 38 years.[23] Two incidents in close to 40 years are very accurately described as "atypical" and "not likely to occur," and repetition of such events is purely "speculative."[24] It is also notable that Petitioners state that the refinery involved in one of the prior releases is "still operating, and still using HF" 38 years later. Petition at 42.[25] This refinery has not experienced any HF releases since that time. Thus, the HF release was, by definition, a "one-time accident" and cannot be treated as a more frequent occurrence that could be considered a "condition of use" of the alkylation process.

Future incidents are particularly unlikely and speculative given industry's compliance with the existing PSM standard under OSHA and EPA's RMP requirements. Through those rules, refineries continuously reduce risk through risk management programs that include the identification and mitigation of hazards through Management of Change, Hazard Assessments, and Layers of Protection Analysis, in addition to other measures. Those programs are also audited every three years to ensure their effectiveness. Industry shares lessons learned so that refineries can utilize the information as part of their hazard analyses.

In addition to regulations, API RP-751 provides the recommended operating practices specific to HF alkylation. It covers the specific hazards and characteristics around HF and the corresponding requirements for worker protection, inspections, metallurgy and mechanical integrity, risk assessments, mitigations including early detection and active and passive mitigations, inventory control, and transportation. The document is updated with the latest knowledge every 5 years and, in the most-recent revision (after the incidents identified by Petitioners), changed 107 recommendations to requirements. Although API RP-751 is a US standard, it is recognized globally as the gold standard for HF alkylation operations. The most recent edition of the standard, published in 2021, included updates such as a requirement to

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[22] *Id.*

[23] Petition at 41-42 (describing a 1987 incident in Texas) and 43 (describing a 2019 incident in Philadelphia). Petitioners also include a "near-release" in 2015 and an assertion of approximately two-dozen "leak[s]" "since 1987." Petition at 42-44. Notably, however, neither the 2015 "near-release" nor the two-dozen undescribed "leak[s]" in the last 38 years have resulted in any HF exposure to any individual or the environment. They thus do not serve as evidence for a proposition that exposure from unintended releases of HF is "regular or predictable" or "reasonably foreseen."

[24] *See Section II.B infra* for a detailed discussion of comparative risk statistics.

[25] The other refinery suffered property damage and was not reopened.

establish critical limits to prevent any operation that might constitute harm to safety or the environment, additional criteria for personal protection equipment, more robust criteria for PHA team members and more robust guidelines for emergency response and control planning. These more-recent changes to API RP-751 that help prevent future incidents are in addition to many other types of mitigation measures that have been previously implemented.

Under API RP-751, every refinery conducts a specific risk analysis of their HF unit, and that analysis determines realistic scenarios and corresponding mitigation measures, , given their location, configuration, and amount of HF on site. Importantly, while RMP and PSM provide the framework to prevent accidental releases and reduce risk, API RP-751 provides the recommendations for how a facility might do that.

Because every refinery is unique, with different engineering configurations and physical footprints, and different types and quantities of crude oil being processed and petroleum products being produced, the specific risk mitigation measures implemented vary from refinery to refinery. However, all facilities participate in the federal OSHA, PSM, and RMP programs and implement technical mitigation tools to prevent releases and ensure the earliest possible detection and fastest possible response to any potential release. Each refinery employs some combination of the following technologies and safeguards to prevent, detect and contain HF-related incidents:

- Prevention of chemical release: Accomplished using closed-loop systems with redundant engineering safeguards; robust inspection and mechanical integrity programs including Integrity Operating Window (IOW) programs and double-sealed pumps. IOW's identify the safe operating limits, which can be thought of as clear lane markers for acceptable flow, temperature and pressure levels in a unit. In addition, a material verification program, which includes component checks and positive materials identification, to confirm the different metals and alloys in a unit so corrosion rates can be monitored and appropriate maintenance schedules maintained; extensive training programs; and preventive maintenance.
  Lastly, API RP 751 specifies HF unloading and sampling requirements, corrosion monitoring location requirements, repair requirements, use of tubing requirements, utility connection requirements (to prevent HF incursion into non-HF systems), and requirements for lifting over in-service equipment.
- Detection: Accomplished through 24-hour video monitoring, operator rounds, and live-unit diagnostics; acid-detecting paint, which changes color from yellow to red at even the slightest presence of HF (down to the parts per billion level) to allow early responses; multiple individual point sensors and perimeter laser monitors (some of which are programmed to automatically activate other mitigation systems upon alert); multiple targeted, continuously monitored live camera feeds; monitoring of cooling water and steam condensate for fluorides in the event of a tube leak; hydrocarbon detectors; and/or integrated unit and facility alarms that cannot be overridden short of incident resolution.
- Containment: Accomplished through rapid acid transfer and remote isolation systems; remotely activated block valves for HF isolation; remote-activated and controlled water

mitigation systems (e.g. water cannons, water walls, water curtains, or equipment deluges, each of which absorbs and dissolves HF because the chemical is completely soluble in water); use of modified HF (a vapor suppression additive); external flange and equipment barriers; dikes and absorbent booms; and specialized PPE for HF unit operators and emergency responders. An image showing sample HF containment measures can be found in Attachment 1 (Alkylation Safety & Risk Mitigation in the Production of Cleaner Fuels).

AFPM/API cannot confirm the accuracy of Petitioners' allegations regarding the number of facilities that do not employ a particular mitigation measure, but such a pinpoint statistic demonstrates Petitioners' lack of knowledge regarding safety standards and is irrelevant because it ignores the required engineering controls and implementation of RP-751's other "menu options" that a facility could employ to provide the required degree of risk mitigation, depending on its particular circumstances. This menu of risk mitigation options is provided in API RP-751, which is considered the global standard for safely and reliably managing HF alkylation operations at refineries.[26] API RP 751 provides refineries with multiple layers of protection for HF alkylation unit operations. At a minimum, API RP-751 requires each site to maintain an HF chemical detection system, an HF water mitigation system, an HF leak monitoring system, and HF release detection/release isolation systems. The way these items are deployed by a refinery are based upon the risks presented to the facility and the community – making a boilerplate system unrealistic and inappropriate. Moreover, Petitioners also fail to understand or acknowledge that in many instances the mitigation measures listed in the RMP alternate case and worst-case scenarios do not include a comprehensive list of all mitigation measures in place.

The risk of an HF release from a facility is extremely low; however, the likelihood of a release impacting humans or the environment is even lower. Refineries have implemented many safety measures since the 1987 release – the technology for mitigation and automation has significantly improved in almost 40 years – that further reduce the likelihood of such a large-scale release today. As such, the exposures from this event cannot be used as a proxy for exposures from a potential future event. Putting that aside, it is notable that even without the modern mitigation measures that have been implemented in the last four decades[27], the number of people requiring medical attention because of the 1987 release, are a mere fraction of the hundreds of thousands of casualties to which Petitioners point to in their hypotheticals. The Petition also alleges that six people were injured in the 2019 Philadelphia release, but those injuries minor and appear to have been unrelated to HF exposure.[28] Nationally, there have never been any life-threatening injuries to people in surrounding communities as a result of HF-related

[26] The latest version of API RP-751 can be accessed at the following url: https://www.api.org/products-and-services/standards/important-standards-announcements/751. We expect to provide EPA with a copy of this document, which contains confidential business information (CBI), as part of a separate submission.
[27] RMP and PSM were first enacted in the Clean Air Act Amendments of 1990. In addition, the first Edition of RP-751 was published in 1992.
[28] https://www.csb.gov/assets/1/6/pes_final_report_published_october_2022.pdf at 24.

incidents,[29] EPA data show that the number of RMP-reportable events has dropped by half in the last decade[30] and has not risen, as alleged by Petitioners. This lack of mass exposure and injury is due to the sorts of protections described above, as well as planning and coordination for emergency response, as described in the RMPs and EPCRA planning, which together ensure community and environmental safety even in the rare event of a release.

HF releases from refineries are speculative and not likely to occur and would be, at most, singular accidents caused by an atypical one-time set of circumstances. As such, they cannot be considered part of a "condition of use" subject to risk evaluation or regulation under TSCA Section 6.

C. Release From A Train Is Not Reasonably Foreseen And Is Already Covered By Other Federal Laws.

Release of HF from a train delivering to a refinery is not reasonably foreseen and cannot be considered part of the alkylation condition of use. Critically, Petitioners have the completely wrong facts. HF is not moved via rail to refineries in the United States for use in the alkylation process. Refineries that use HF for alkylation move the HF solely via truck, not rail. As such, any release of HF for refineries from a train is unrealistic and should not be part of any condition of use related to alkylation. Moreover, the risk of HF transportation is appropriately regulated by PHMSA. *See* discussions in Sections II.C, *supra* and III.D, *infra*.

D. Release From A Truck Is Not Reasonably Foreseen And Is Already Covered By Other Federal Laws.

As a preliminary matter, distribution in commerce is its own condition of use separate and apart from use in a refinery, and EPA must evaluate these conditions separately. The statute itself differentiates between use and distribution when describing conditions of use, stating that "conditions of use" means "the circumstances, as determined by the Administrator, under which a chemical substance is intended, known, or reasonably foreseen to be manufactured, processed, distributed in commerce, used, or disposed of."[31] This phrase distinguishes between various potential conditions of use, of which use and distribution in commerce are two separate possibilities, not a combined "use, including distribution for that eventual use" as proposed by Petitioners. This divide is reflected in EPA's prior risk evaluations, which distinguish between use and distribution as separate conditions of use. Such a division makes sense given the vastly different exposure scenarios for use compared to distribution. Thus, any alleged risks related to

[29] Attachment 1 (Alkylation Safety & Risk Mitigation in the Production of Cleaner Fuels).
[30] *Id.*
[31] 15 USC 2602(4)

the transportation of HF would be distinct and cannot be considered when evaluating use in a refinery, which is a separate condition of use.[32]

Even considering distribution of HF as a potential condition of use, unlikely and speculative accidental HF releases from trucks are not part of that condition of use. Petitioners identified only two instances in which HF was released from a truck in transit, and one instance in which HF was released during transfer. They have thus identified three instances of some potential exposure during a 16-year period. HF releases from trucks are rare, unpredictable incidents from one-time situations (i.e., unforeseeable), not "regular or predictable exposures." As such, HF releases from trucks are not appropriately classified as part of the distribution in commerce condition of use of HF.

It is worth noting that even these few releases from trucks are not the type that Petitioners use in their hypothetical scenarios regarding mass exposure. All of the releases identified by Petitioners were slow leaks of relatively small quantities, that did not cause any harm to communities or environments. The 2009 incident involved "a drip leak," and both of the other truck-related incidents also involved leaks, not large-scale releases. Petition at 47-48. Between the three incidents, one truck driver was injured, but there was no community exposure. Such minimal releases do not support the consideration of the types of catastrophic events hypothesized by Petitioners.

The rarity and incredibly small scale of releases from truck transit of HF is due to risk mitigation measures that are already in place, both as a result of other statutes and industry use of best practices. The Pipeline and Hazardous Materials Safety Administration (PHMSA) within the Department of Transportation (DOT) comprehensively regulates HF in transportation. For example, PHMSA specifies permissible containers for HF (*see,* 49 CFR 173.163; *see also* 49 CFR 172.101, referring to 49 CFR 173.244 for requirements for bulk shipments of HF). PHMSA regulates HF based on a classification as both a corrosive material (49 CFR Appendix D to Part 180) and a poisonous hazardous material.[33] As such, PHMSA imposes additional transport regulations, such as more-frequent inspections of conveyances[34] and specific marking and labeling,[35] among other precautions. Moreover, there have been significant changes over the years to truck unloading practices, as mentioned in the latest version of API RP-751, such as the

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[32] Moreover, regulation of distribution of HF for purposes of use in a refinery would be arbitrary; it poses no more risks than distribution of HF for other purposes, which Petitioners do not seek to regulate. Imposing restrictions on the distribution of HF for refinery uses would be arbitrary and capricious.

[33] *See* https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/legacy/interpretations/Interpretation%20Files/2000/000256.pdf

[34] 49 CFR Part 180, Subparts E and F.

[35] *See* https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/legacy/interpretations/Interpretation%20Files/2000/000256.pdf

use of emergency stop systems that shut off the truck and the refinery valves simultaneously in the event of a leak, thus further reducing the likelihood of releases during loading or unloading.

IV. EPA Should Deny the Petition Because the Risks Alleged in the Petition are Appropriately Regulated Under Other EPA-Administered Statutes.

TSCA does not operate in a vacuum and does not have primacy over any other statutes, environmental or otherwise. In Section 9(b), Congress commanded EPA to "coordinate actions taken under this chapter with actions under other Federal laws administered in whole or in part by the Administrator."[36] Congress further directed that EPA "shall use such authorities [in other laws] to protect against such risk" if EPA determines that a risk "could be eliminated or reduced to a sufficient extent."[37] EPA may act under TSCA *only* if it is in the public interest. That determination requires EPA to "consider, based on information reasonably available to [EPA], all relevant aspects of the risk . . . and a comparison of the estimated costs and efficiencies of the action" to be taken under TSCA versus a different federal law. *Id.* § 2608(b)(2).

The legislative history for the 2016 TSCA Amendments illustrates Congress's intent to reinforce the presumption that EPA regulate risks under other laws before using TSCA. A House Report describes the amendments to Section 9, including the addition of the public interest consideration, as "reinforc[ing] TSCA's original purpose of filling gaps in Federal law that otherwise did not protect against the unreasonable risks," H. Rep. No. 114-176, at 28 (2015), and "encourag[ing] decisions that avoid confusion, complication, and duplication." *Id.* Relatedly, Representative Pittenger summarized the amended Section 9 as "reemphasiz[ing] and strengthen[ing] Congress' intent that TSCA serve as *an authority of last resort* for the regulation of a chemical when another authority under EPA's jurisdiction, or another Federal agency, *already regulates the chemical and the risk identified* by EPA," meaning EPA "may not promulgate a rule under Section 6 of TSCA … when … *the agency … already regulates that chemical through a different statute under its own control*, like the Clean Air Act, *and that authority sufficiently protects against a risk of injury to human health or the environment* …" 162 Cong. Rec. H3028 (May 24, 2016) (emphasis added).

EPA has previously denied TSCA Section 21 petitions where the Agency concluded that the concerns presented in the petitions are better addressed under another EPA-administered law or other federal statutes. For example, in denying a petition to initiate a Section 6 rulemaking to address risks related to polyvinyl chloride, vinyl chloride, and phthalates used as plasticizers, EPA noted the Petitioner "has not explained why it believes it would be preferable to address the risks of disposal under TSCA, rather than through other statutory authorities" or how a hypothetical action under TSCA "could be coordinated, consistent with TSCA Section 9(b), with other actions that EPA has already taken with respect to these chemical substances under other

[36] 15 U.S.C. § 2605(b)(1).
[37] *Id.*

statutes that EPA administers."[38] Similarly, in denying a petition to initiate a Section 6 rulemaking to "eliminate or reduce the disposal and emission of numerous toxic substances into the air, land, and water of Southeast Chicago," EPA explained that:

> the Clean Air Act, the Clean Water Act, the Safe Drinking Water Act, the Resource Conservation and Recovery Act, and the Comprehensive Environmental Response, Compensation and Liability Act can adequately address the issues raised by the petition and that these other acts are more appropriate than TSCA to address the majority of the environmental pollution problems caused by toxic chemicals in the Southeast Chicago area.[39]

EPA emphasized that "Congress specifically directed EPA, in Section 9 of TSCA, to use other statutes instead of TSCA if they could be used to eliminate or sufficiently reduce unreasonable risk."[40] These prior denials are not outliers.[41]

The Petition does not acknowledge the extensive regulatory framework applicable to HF, much less discuss whether other EPA-administered laws could eliminate or sufficiently reduce alleged risks. Nor does the Petition compare estimated costs and efficiencies of a potential TSCA Section 6 action versus action under other EPA-administered laws. As EPA explained in its denial of a different petition to prohibit use of hydrofluoric acid at oil refineries, there are numerous EPA-administered statutes that can be used to address the concerns raised in the Petition, such as CERCLA, EPCRA, and the CAA.[42] Specifically, hydrogen fluoride (CASRN 7664-39-3) is regulated under CAA Section 112(r)(7), CERCLA, Clean Water Act Section 311(j)(5), and EPCRA Sections 302, 304, 311 and 312. Together, these statutes cover requirements applicable to safe facility design and maintenance as well as preparation for and emergency response to accidental and other nonroutine releases.

V. EPA Cannot Lawfully Grant the Relief Requested in the Petition.

NRDC urges EPA to "promptly begin a TSCA Section 6(a) rulemaking to ban refinery-related HF use[.]"[43] But even if EPA were inclined to grant the Petition, it cannot jump straight to promulgating a ban on such use. EPA would have to undergo risk evaluation and a full Section

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[38] Discarded Polyvinyl Chloride; TSCA Section 21 Petition; Reasons for Agency Response , 79 Fed. Reg. 64,722, 64,724 (Oct. 31, 2014).
[39] Investigation and Rulemaking Action Concerning Southeast Chicago; Denial of Citizens' Petition, 49 Fed. Reg. 43,764, 43,765 (Oct. 31, 1984).
[40] *Id.*
[41] *Accord* 48 Fed. Reg. 33,739, 33,744 (Jul. 25, 1983) (dioxin levels in pulp and paper effluent best addressed under RCRA); 54 Fed. Reg. 52,993 (Dec. 26, 1989) (stating that it would be neither necessary nor productive for it to develop TSCA rules for PCB disposal facilities in light of the then on-going Office of Solid Waste and Emergency Response (OSWER) efforts to establish standards for monitoring well construction.).
[42] TSCA Section 21 Petition to Prohibit the Use of Hydrofluoric Acid at Oil Refineries; Reasons for Agency Response, 84 Fed. Reg. 60,896, 60,987 (Nov. 12, 2019).
[43] Petition at 56.

6(a) rulemaking process to decide on appropriate risk mitigation. For purposes of this response, AFPM/API focus on the need for risk evaluation and risk mitigation processes, though AFPM/API do not waive arguments that prioritization would be required before such processes.

Under TSCA Section 21(b)(1), the Petitioner bears the burden of "set[ting] forth the facts which it is claimed establish that it is necessary to issue . . . a rule under [Section 6].[44] As EPA has long recognized, Section 21 thus "incorporates the statutory standards that apply to the requested actions."[45] The Section 21 citizen petition process does not give EPA a free pass to skip over the three-step process for a Section 6 rulemaking: prioritization, risk evaluation, and risk management. Thus, if a petition does not set forth facts that meet the standards for any of these steps,[46] EPA must deny the petition.

A. EPA Cannot Engage In Risk Management Rulemaking Without First Conducting A Risk Evaluation.

Before EPA can regulate a substance under TSCA, EPA must "determine whether a use of a chemical substance presents an unreasonable risk of injury to health or the environment without consideration of costs or non-risk factors."[47] EPA has recently underscored that "[b]y law, the Agency begins the process of determining appropriate risk management actions under TSCA Section 6(a) *only after a determination of unreasonable risk is made in the risk evaluation.*"[48] Here, as detailed above in Section II.B, the Petition does not set forth facts demonstrating that use of hydrogen fluoride in oil refining presents an unreasonable risk. Before EPA could propose a ban on such use, it would have to conduct a risk evaluation that meets the requirements applicable to risk evaluations under Section 6(b) and the scientific standards requirements in Section 26.

B. Even If EPA Determines that Hydrogen Fluoride Presents an Unreasonable Risk, It Cannot Proceed Immediately to a Ban on Use in Oil Refining.

If EPA finds that conditions of using a chemical substance present an unreasonable risk of injury to health or the environment, it must move to the third step of the Section 6 rulemaking process: risk management.[49] The risk management step requires EPA to consider costs, among

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[44] 15 U.S.C. § 2605(b)(1).
[45] *E.g.*, 84 Fed. Reg. 60,986 (Nov. 12, 2019); 78 Fed. Reg. 48,845 (Aug. 12, 2013).
[46] Congress outlined a streamlined process for Section 6 rulemaking as to chemicals that are persistent, bioaccumulative, and toxic. *See* 15 U.S.C. § 2605(h). Chemical substances that are identified under this section need not undergo prioritization or risk evaluation. Hydrogen fluoride is not among the chemicals subject to the streamlined Section 6(h) process.
[47] 15 U.S.C. § 2605(b)(4)(A).
[48] U.S. EPA, Response to Comments on Procedures for Chemical Risk Evaluation Under the Toxic Substances Control Act (TSCA) EPA-HQ-OPPT-2023-0496, § 1.2, *available at* https://www.regulations.gov/document/EPA-HQ-OPPT-2023-0496-0431 (emphasis added).
[49] 15 U.S.C. § 2605(a).

various other statutory factors.[50] EPA must consider the magnitude of the exposure of humans and the environment to the chemical substance and the benefits of the chemical substance for various uses.[51] *Id.* In addition, EPA must consider the reasonably ascertainable economic consequences and cost effectiveness of any proposed rule, including the likely effect on the national economy, small businesses, technological innovation, the environment, and public health.[52]

In regulating a chemical substance under Section 6(a), Congress directed EPA to choose from a specific set of regulatory approaches: (1) prohibiting or otherwise restricting the manufacture, processing, or distribution of the substance or limiting the amount of the substance that can be manufactured, processed, or distributed; (2) prohibiting or otherwise restricting the manufacture, processing, or distribution of the substance for a particular use or use in excess of a certain concentration; (3) requiring clear warnings or instructions on the substance; (4) imposing record or testing requirements; (5) prohibiting or regulating a manner of use of the substance; (6) prohibiting or regulating the disposal of the substance; and (7) requiring notice of the determination to the public or affected persons.[53] EPA may only apply such measures "*to the extent necessary* so that the chemical substance or mixture no longer presents such risk."[54]

Again, EPA cannot issue a risk management rule under TSCA section 6 if the risk to human health or the environment can be sufficiently eliminated or reduced by taking action under a different law administered by EPA, unless EPA finds the TSCA Section 6(a) action is in the public interest.[55] Additionally, if EPA finds that an unreasonable risk "may be prevented or reduced to a sufficient extent" by action under a federal law that EPA does not administer, it "shall submit to the agency which administers such law a report which describes such risk and includes in such description a specification of the activity or combination of activities which [EPA] has reason to believe so presents such risk."[56] After this mandatory reporting, EPA cannot take action under TSCA if the other agency either (1) determines that there is no unreasonable risk; or (2) initiates action to protect against such risk.[57]

The Petition does not come close to meeting the requirements for promulgating a prohibition under TSCA Section 6(a). Although the Petition briefly discusses purportedly safer alternatives to using hydrogen fluoride in oil refining,[58] the Petition fails to address the multitude of other factors that EPA must consider during risk management rulemaking under Section 6(c)(2). EPA must consider the reasonably ascertainable economic consequences of any

[50] *Id.* § 2605(c)(2).
[51] *Id.*
[52] *Id.*
[53] *Id.* § 2605(a).
[54] *Id.* (emphasis added).
[55] *Id.* § 2608(b).
[56] *Id.* § 2608(a)(1).
[57] *Id.* § 2608(a)(2).
[58] *See* Petition at 55-56.

proposed rule, including the likely effect on the national economy. The effect of Petitioners' proposed ban would be huge. Contrary to the Petition's assertions, refineries cannot simply switch away from HF. Once a refinery chooses a catalyst and builds its alkylation unit for that technology, it cannot quickly or easily swap to the other. HF and sulfuric acid technology are not interchangeable. HF and sulfuric units have completely different designs, footprints, and technological requirements. Banning HF use in refineries would be an un-strategic move that would impact U.S. energy and economic security.[59]

Of equal importance, were EPA to jump straight to proposing a ban on hydrogen fluoride use for oil refining under Section 6(a), it would flout the requirements in Section 9 to send reports to other agencies when unreasonable risk "may be prevented or reduced to a sufficient extent" by action under a federal law that EPA does not administer[60] and to coordinate actions taken under TSCA with actions taken under other federal laws that EPA administers.[61] Although the Petition mentions the RMP rule in passing,[62] it fails to mention that there are numerous other existing laws and regulatory programs that address hydrogen fluoride (*e.g.*, CERCLA; EPCRA[63]; Hazardous Materials Transportation Act (DOT) (discussed in section II.C and III.D, *supra*), OSHA Process Safety Management (discussed in the Introduction and section III.B, *supra)*; Maritime Transportation Security Act (Coast Guard). Before EPA could propose to ban hydrogen fluoride in oil refining under TSCA Section 6(a), it must first analyze whether to defer to other agencies and whether appropriate action can be taken under other EPA-administered laws to address the concerns raised in the Petition.

VI. Conclusion

The Petition does not justify the proposed ban on HF use. The alleged risks to which Petitioners point are based on highly improbable scenarios and assumptions that do not qualify as part of a "condition of use" that may lawfully be regulated under TSCA. Even if the highly speculative scenarios could be considered "conditions of use," Petitioners have failed to demonstrate that those scenarios represent an "unreasonable risk." If there were an unreasonable risk, such concerns would be more appropriately regulated under other EPA-administered

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[59] A study looking at a specific Southern California refinery found the cost to replace its HF unit with a significantly larger sulfuric acid alkylation unit (because more sulfuric catalyst is required to produce the same volume of alkylate) and brand-new sulfuric acid regeneration unit (a requirement for sulfuric alkylation, but not HF alkylation) would approach $1 billion—significantly more than what this facility was valued at in its last sale. Any loss of U.S. alkylate production and potential loss of U.S. refining capacity stemming from prohibitions on the use of HF would likely result in more expensive gasoline and the potential depletion of already-tight U.S. fuel supplies. The U.S. would likely have to import alkylate from other countries. As a result, the aforementioned study concluded that a Southern California regional loss of alkylate production and the resulting need to import alkylate would likely add an additional 26-cents per gallon to the price of finished gasoline for Southern California consumers. https://afpm.org/issues/safety-health/alkylation-safety

[60] 15 U.S.C. § 2608(a).

[61] *Id.* § 2608(b).

[62] *See* Petition at 54.

[63]

statutes. Finally, if EPA found that HF releases qualified as part of the manufacturing condition of use, found that such use poses unreasonable risk, and ignored the applicability of other laws, then EPA would still need to thoroughly evaluate the risks of HF and any other available mitigation options. For all of the foregoing reasons, the Petition must be denied.