October 31, 2024

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U.S. Environmental Protection Agency
EPA Docket Center
1200 Pennsylvania Avenue NW
Washington, DC 20460

Re: EPA Prioritization of Chemicals Under the Toxic Substances Control Act (TSCA), Pre-Prioritization for Hydrogen Fluoride, Docket EPA-HQ-OPPT-2023-0606

To Whom It May Concern:

The Hydrogen Fluoride Panel of the American Chemistry Council (HF Panel) hereby submits comments on the pre-prioritization of hydrogen fluoride (HF). Our comments focus on summarizing existing regulations in place for the HF industry and risk assessment and risk management information already available for HF. These regulatory and risk management programs, in place for many years, sufficiently protect workers, downstream users, and the public. This information provides the basis for EPA to conclude that HF should not be listed as a high priority chemical under TSCA.

Introduction

The HF Panel membership includes producers and major industrial users of HF in North America. The HF Panel addresses the use, manufacture, transportation, emergency response, health effects, and environmental impacts associated with Anhydrous Hydrogen Fluoride and Hydrofluoric Acid (collectively referred to as HF). In addressing these items, the HF Panel maintains a strong focus on product stewardship.

Product Stewardship Commitment

An example of the Panel's product stewardship commitment is its Emergency Preparedness and Response Guidelines for Anhydrous Hydrogen Fluoride (AHF) and Hydrofluoric Acid (HF) (2018), Emergency Preparedness and Response Guidelines for Anhydrous Hydrogen Fluoride (AHF) and Hydrofluoric Acid (HF) - American Chemistry Council. This guide summarizes

information on the basic properties of HF, environmental fate and effects, health factors and industrial hygiene, and personal protective equipment. The guide also addresses emergency response and first aid. A separate publication is available on initial treatment that is targeted to site personnel, first responders and medical personnel.

The HF Panel is organized under ACC's HF Sector Group. The Group also includes the Hydrogen Fluoride Industry Practices Institute (HFIPI), Hydrogen Fluoride Industry Practices Institute (HFIPI) - American Chemistry Council. HFIPI develops and publishes recommended practices specific to the HF industry. HFIPI members recognize that sustaining the safety record for HF depends on active dissemination of technologies and the continual education of the entire industry. HFIPI guidance provides information on materials of construction, design and construction of HF tank cars, personal protective equipment (PPE), bulk storage of HF, and loading and unloading practices.

Additional resources and training from the HF Panel and its member companies focus on process and operational safety, hazmat training, and the use of PPE. On a regular basis, the HF Panel conducts a multi-day safety seminar for all HF producers and users. This seminar provides information on safe handling, regulations, emergency response and first aid, PPE, and lessons learned from investigations of relevant incidents and near incidents. Typical topics include:

- HF detection equipment
- Safe HF transportation and storage
- HF handling equipment (piping, valves, gaskets, chemical transfer hoses, vessel fabrication & repairs)
- Mechanical integrity
- HF first aid and medical treatment

Several HF Panel member companies also conduct similar training seminars.

Reinforcing its commitment to product stewardship, the HF Panel after its formation created a mutual aid network. The network provides trained expertise, and where needed, equipment to respond to transportation or other incidents involving HF. The network is supplemented by commercial emergency response experts that are contracted directly by the Panel members.

Uses of HF

HF is a very well-studied, well-regulated, substance that is at the core of a number of U.S. industries. As a building block chemical, HF is available either as anhydrous, hydrogen fluoride, or as a 70% aqueous solution. It is a critical component in the production of gasoline and in producing fluorine-containing materials such as refrigerants, pharmaceutical intermediates and fluoropolymers. Other uses include metals manufacturing, glass etching and polishing, stainless

steel pickling, semi-conductor preparation and various applications in the chemical and specialty metal production industries.

HF has important uses in national defense and clean energy applications. For instance, uranium hexafluoride (UF_6), an HF derivative, is used in uranium enrichment for nuclear power plants and for reactors in nuclear powered aircraft carriers and submarines and nuclear weapons. HF is also used in the production of lithium hexafluorophosphate ($LiPF_6$), an electrolyte in electric car batteries.

Existing Regulations for HF

Regulations that impact HF are widespread and originate from EPA, OSHA, and others. Selected regulations are briefly summarized below and do not represent a comprehensive listing.

EPA regulations include Maximum Achievable Control Technology (MACT) standards under Section 112 of the Clean Air Act (CAA) and specific RMP regulations for anhydrous HF. The MACT standards also apply to HF storage vessels, process vents, transfer racks, and equipment leaks. Section 63.1103 of the MACT addresses the following:

> ***Hydrogen fluoride production applicability, definitions, and requirements*** —
> (1) ***Applicability*** —
> (i) ***Affected source*** —For the hydrogen fluoride production (as defined in paragraph (c)(2) of this section) source category, the affected source shall comprise all emission points, in combination, listed in paragraphs (c)(1)(i)(A) through (D) of this section, that are associated with a hydrogen fluoride production process unit located at a major source as defined in section 112(a) of the Act.
> (A) All storage vessels used to accumulate or store hydrogen fluoride.
> (B) All process vents from continuous unit operations associated with hydrogen fluoride recovery and refining operations. These process vents include vents on condensers, distillation units, and water scrubbers.
> (C) All transfer racks used to load hydrogen fluoride into tank trucks or railcars.
> (D) Equipment in hydrogen fluoride service (as defined in paragraph (c)(2) of this section).

Anhydrous HF is also subject to the RMP requirements under Section 112(r) of the CAA for any quantity at or above 1,000 pounds and the hazardous chemical inventory reporting provisions under EPCRA Sections 311 and 312. HF is regulated under RCRA as a hazardous waste for corrosivity and toxicity. Under the EPA Extremely Hazardous Substance (EHS) program, HF has a threshold planning quantity of 100 pounds under Section 302 of EPCRA and requires

companies to implement process safety management to protect employees by preventing or minimizing the consequences of chemical accidents.

OSHA standards regulate occupational exposure to HF. The permissible exposure limit (PEL) is 3 parts per million (ppm) averaged over an 8-hour workday. The NIOSH REL is also 3 ppm averaged over 10 hours, and a 6 ppm ceiling based on a 15 minute exposure. ACGIH set an 8 hour TLV of 0.5 ppm (2004). NIOSH established an IDLH concentration of 30 ppm (1994) based on acute toxicity. Occupational exposure of HF in the U.S. is carefully monitored and regulated under these standards.

Existing regulations impacting HF producers and users provide a comprehensive foundation for protecting workers and the public. When Congress amended TSCA in 2016 it specifically directed the Agency to implement TSCA regulations in a "manner as not to impede unduly or create unnecessary economic barriers to technological innovation" and in a "reasonable and prudent manner, and that the Administrator shall consider the environmental, economic, and social impact of any action the Administrator takes or proposes as provided under this chapter."

HF Exposure Information

Health hazard information for HF has been summarized by EPA (see https://www.epa.gov/sites/default/files/2016-10/documents/hydrogen-fluoride.pdf), 2016. Detailed information is provided in the European Union Risk Assessment Report (https://echa.europa.eu/documents/10162/be5a5363-654a-4efd-beae-1abdf730245b). The REACH dossier provides data on human health toxicity including mutagenicity, carcinogenicity, reproductive toxicity, and irritation.

ATSDR published guidelines for the medical management of HF exposure, https://www.atsdr.cdc.gov/mhmi/mmg11.pdf . While somewhat dated, the guidance provides procedures for prehospital and emergency department treatment.

HF monitoring data are available from the South Coast Air Quality Management District in California. Rule 1180 requires selected refineries to monitor for certain air pollutants, including HF. Six refineries and related industrial facilities are subject to the monitoring program. To date, ambient air concentrations of HF have been non-detectable or very low ppb values.

Summary

HF is a well-studied, well-regulated, substance that is at the core of a number of U.S. industries from national defense to everyday products. This EPA risk evaluation of HF could be highly impactful on a wide range of U.S. manufacturing industries that go far beyond the manufacturers and immediate downstream users of HF.

HF is a data rich chemical that does not merit further review under TSCA. Existing regulations impacting HF producers and users provide a comprehensive foundation for protecting workers and the public. The HF Panel and its member companies provide strong product stewardship, hazardous material management, and training programs designed to protect workers and the public. We strongly encourage EPA to consider all of the available information on HF that supports a conclusion of not listing HF as a priority chemical.

Thank you for your consideration of these comments. Please feel free to contact me at bill_gulledge@americanchemistry.com if you have questions or need more information.

Sincerely,

William Gulledge

William P. Gulledge
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