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FSSA
FIRE SUPPRESSION SYSTEMS ASSOCIATION

the leading authority and advocate of special hazard fire protection

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Position Statement on Exemption of EPA-Accepted Fire Suppression Agents from PFAS Regulation

May 2024

FSSA Position: Any proposed state or local legislation or regulation of the sale or use of PFAS should exempt Clean Agents when used in fire and explosion protection applications. Clean Agents used for fire protection are now regulated – *and acceptable for use* - by the U.S. Environmental Protection Agency at the federal level, which avoids potential chaotic conflict with various local rules.

Justified Statutory/Regulatory Exemption: "…products listed as acceptable, acceptable subject to use conditions, or acceptable subject to narrowed use limits by the U. S. Environmental Protection Agency in accordance with the Significant New Alternatives Policy, Code of Federal Regulations Title 40, Part 82, Subpart G, when a product is sold, offered for sale or distributed for the use for which it is listed."

Justification for FSSA's Position follows.

The Fire Suppression Systems Association (FSSA), www.fssa.net, is a membership organization whose members include the manufacturers and designer-installers of special hazard fire suppression systems using non-water extinguishing agents. Special hazard fire suppression systems include engineered and pre-engineered fixed fire suppression systems which use non-water fire extinguishing agents, such as **clean agent fire suppressants** classified as "Acceptable" by the U.S. Environmental Protection Agency in its SNAP List. (hereafter collectively, "Clean Agents").

Clean Agents are among the hundreds of substances in a broad class of compounds known as PFAS. PFAS are per- and poly-fluoroalkyl substances that do not occur naturally in the environment. PFAS compounds contain an alkyl carbon chain on which hydrogen atoms have been partially or completely replaced by fluorine atoms. PFAS are ubiquitous because of their widespread use in commerce in addition to fire protection: life-saving medications, rechargeable batteries, catheters and pacemakers, semiconductors, cell phones, automobiles, renewable energy technologies and many more.

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Importantly - unlike some PFAS - Clean Agents are non-PBT: not **P**ersistent in the environment; not **B**ioaccumulative; and not **T**oxic. See discussion in Section II below.

I. What are Clean Agents?

Clean Agents include these agents, along with their Chemical Abstract Service Registry Numbers:

HFC 227ea	CAS 431-89-0
HFC 125	CAS 35433-6
FK-5-1-12	CAS 756-13-8
HFC 236fa	CAS 690-39-1
2-BTP	CAS 1514-82-5
HCFC Blend B	CAS 306-83-2
Halocarbon Blend 55	CAS 756-13-8 and CAS 102687-65-0

Importantly, Clean Agents listed above do not include fluorinated firefighting foam agents.

Special hazard fire suppression systems using Clean Agents provide critical fire protection and life safety to such high hazard or high value infrastructure and essential facilities as:

- National defense systems,
- Commercial and military aviation,
- Telecommunication systems, data processing and storage installations,
- Petrochemical facilities and energy pipelines,
- Explosion hazards,
- Power generation, transmission and control, and
- Irreplaceable art objects and documents (our Bill of Rights at the National Archives, the Smithsonian Institute, Mount Vernon, etc.)

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The majority of these systems use high-pressure and low-pressure DOT qualified containers for storage of various types of fire extinguishants. Importantly, Clean Agents are held in storage cylinders and are not released to the atmosphere unless the purpose is to suppress a fire or explosion hazard after the system detects an unwanted event.

II. No Clean Agent has been listed by the EPA as a toxic chemical on the TRI List.

There are approximately 600 PFAS compounds manufactured and used in the United States, according to the EPA. (84 Fed. Reg. 66371, Dec. 9, 2019). There are 180 PFAS compounds listed by the EPA as toxic chemicals on its Toxic Release Inventory List (TRI List). Since 1987, the TRI List has been maintained by the EPA under section 313 of the Emergency Planning and Community Right-to-Know (EPCRA). Chemicals on the TRI List have been found by the EPA to cause, or can be reasonably anticipated to cause:

- significant adverse human health effects; or
- cancer, serious or irreversible reproductive dysfunctions, neurologic disorders, genetic mutations, or other chronic health effects, or
- *a significant adverse effect on the environment because of its* ***toxicity,*** *or its toxicity and* ***persistence in the environment****, or its toxicity and tendency* ***to bioaccumulate in the environment.***

These three criteria for a compound's inclusion on the TRI List are contained in EPCRA §313(d)(2) (emphasis added).

As noted by the EPA, "*some* PFAS may be toxic, persistent in the environment, and accumulate in wildlife and humans ... therefore releases of *some* PFAS to the environment and potential human exposure may be of concern." (emphasis added) (84 Fed. Reg. 66370). However, Clean Agents are not on the TRI List. This indicates these compounds are NOT toxic, are NOT persistent in the environment and are NOT bioaccumulative in the environment. They are "non-PBT" substances, i.e., not Persistent, not Bioaccumulative, and not Toxic.

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III. The EPA has determined Clean Agents are "Acceptable" for use in automatic fire suppression systems.

The EPA's Significant New Alternatives Policy (SNAP) list for Substitutes in Fire Suppression and Explosion Protection for total flooding fire extinguishing agents includes all the Clean Agents as "Acceptable" for use as a fire extinguishing agent. EPA evaluates these agents on the basis of environmental and health risks, including factors such as ozone depletion potential, global warming potential, toxicity, flammability, and exposure. Use of these agents, according to the EPA, should be in accordance with the safety guidelines in the latest edition of the National Fire Protection Association Standard 2001, *Standard for Clean Agent Fire Extinguishing Systems*,.

IV. PFAS compounds should not be regulated as a single class of chemical.

Treating all PFAS compounds as a single regulatory group is an approach that is inappropriate, unnecessary, and not supportable by science. PFAS is a large, diverse group of chemical compounds. ALL PFAS ARE NOT THE SAME - their properties vary widely. Chemical and structural differences among different types of PFAS result in vast differences in physical-chemical properties. Their striking chemical and physical differences must be considered in any effort to understand and address potential health or environmental risks.
Regulating chemical substances arbitrarily as a large class will lead to unjustified consequences that are not based on sound science. Banning all widely used PFAS compounds is likely to create economic chaos in the US, destroy countless jobs, harm economic growth, and hamper the ability of businesses and consumers to access essential life safety products like Clean Agent fire suppressants.

A "ban them all" regulatory scheme for PFAS compounds is inconsistent with a more granular consideration of PFAS, according to a variety of sources. Most significantly, the EPA has taken this measured approach by listing 180 specific PFAS on its TRI List (see Section II above). The 38-country Organization for Economic Co-operation and Development (OECD) recognizes more than 30 chemically distinct groups of PFAS (link). In addition, OECD is clear that the broad term PFAS does not inform whether a compound is harmful and that different PFASs have different properties, uses, exposures and potential risks. Most recently,

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the current EPA recognizes the differences among different types of PFAS in both its *PFAS Strategic Roadmap* and *National PFAS Testing Strategy.*

A peer-reviewed scientific study by an independent panel of experts conducted by SciPinion reached the same conclusion. Quoting the study Abstract:

> "Most experts agreed that 'all PFAS' should not be grouped together, persistence alone is not sufficient for grouping PFAS for the purposes of assessing human health risk, and that the definition of appropriate subgroups can only be defined on a case-by-case manner. Most panelists agreed that it is inappropriate to assume equal toxicity/potency across the diverse class of PFAS."

V. Conclusion

Any state or local legislation or regulation that restricts the manufacture, import, distribution, sale or use PFAS should exclude Clean Agents acceptable to the EPA when used in fire and explosion protection applications. The EPA now regulates Clean Agents at the federal level and state and local governments should defer to the Agency's environmental expertise in this critical life safety application.
