

## **Act 131: Testimony Tuesday, February 4, 2025 at 2pm.**

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Good Afternoon. Thank you for offering this time for my testimony.

My name is Sylvia Knight. I live in Burlington, VT near the confluence of the great Winooski River and Lake Champlain. I have worked as a volunteer on pesticide issues for 30 years researching peer-reviewed science, pesticide use data, pesticide policy, and advocating for pesticide reduction. This work arises from my deep awareness that we are all part of an interconnected community of life. I am a member of VT Pesticide and Poison Action Network (VTPAPAN) and VT PFAS/Military Poisons Coalition. I will be talking today about Act 131 and PFAS in relation to pesticides.

### **Act 131/ S.25**

Act 131 /S.25 was passed by the legislature in 2024 and signed by Gov. Scott. We supported the development of this important bill to reduce PFAS in our economy, to reduce their dangers to our land, water, health and future generations.

Act 131 Section 1, #8, (p.2) provides this definition of PFAS: “a class of fluorinated organic chemicals containing at least one fully fluorinated carbon atom”.

Act 131 Section 9 (d) (p.27) *includes restricted and nonrestricted pesticides* as a class of consumer products containing PFAS to be reduced or banned.

### **How are PFAS getting into pesticides? A disagreement with Agency of Agriculture.**

We now know that *PFAS can be in pesticides via several avenues:*

1. as an *EPA-registered active ingredient* in organo-fluorine pesticide products, an increasingly important factor of concern;
2. as a *contaminant leached from a fluorinated container*: for example, malathion insecticides used in VT were contaminated in this way;
3. as an *inert ingredient* (not identified) added to a pesticide product;
4. as unidentified ingredients in drift retardants and surfactants added to pesticide products at an application site.

AAFMAA is ignoring the first avenue, EPA-registered active PFAS ingredients, since they are not among the 5 PFAS regulated by VT. I will discuss this further below.

Regarding the second avenue, AAFM reluctantly recognized in 2022 that Anvil (malathion) and Permanone (permethrin) insecticides had been contaminated from fluorinated high-density polyethylene (HDPE) plastic containers.

Regarding the addition of inerts, Dr. Bryer is denying *that EPA allows any addition of PFAS to pesticides as inerts*. However, the truth is that EPA removed *only 12 PFAS* compounds from the huge class of 14,000 PFAS that may be used as “inert” ingredients in pesticides. Apparently the Act 131 Working Group has accepted this false narrative.

Changing the definition of PFAS to a much more restrictive class of compounds would *exclude* all EPA-registered PFAS active ingredients that are increasingly present in pesticides, to avoid restricting pesticides.

We perceive that the Agency of Agriculture is choosing to *protect* a major group of identifiable toxic pesticides from regulation, while allowing contamination of VT’s people, land and water with persistent, bioaccumulative toxins for years to come.

### **Act 131 Working Group’s response.**

The small group charged with responding to Act 131 includes representatives of Agency of Natural Resources (ANR), Agency of Agriculture (AAFM), Dept. of Health (DOH) and the Office of VT Atty General. This group is the Act 131 Working Group, a very exclusive group.

### **Our First ASKS:**

Our coalition urges you to *not accept* their report for these reasons:

1. it was produced with very little public engagement, in *possible violation of Act 154 of 2022, the Environmental Law of VT.*
2. it *omits pesticides* as a consumer product included in Act 131 sec. 9 (d);
3. it has *changed the definition of PFAS* given in the law, excluding important sources of PFAS in consumer products;
4. it fails to address EPA-registered *PFAS active ingredients* in pesticides.

Please oppose the proposed legislation version 5.1 which

1. delays implementation for 10 years,
2. uses a different definition of PFAS in order to limit banned products, continuing dangerous exposure to developing young people;
3. relies on acceptance by surrounding states, allowing continued danger to our state for the future.

**OUR QUESTION: *How can state officials just change the content of a bill, omit the part they don't like, and change a definition, after it has passed and been signed into law??***

Section 9 A (p.25) charged the Agency of Natural Resources with developing a program “requiring the State to identify and restrict the sale and distribution of consumer products containing perfluoroalkyl and polyfluoroalkyl substances (PFAS)..The proposed program shall: (1) identify categories of consumer products that could have an **impact on public health and environmental contamination.**” (pp.25-26 Act 131 Section 9 A p.25)

Hello? What better way would there be to spread PFAS around Vermont than to allow and use PFAS active ingredients in pesticides?

While Section 9 C (p.27) of Act 131 calls for proposed legislation from the Act 131 Working Group, the proposed legislation is deeply flawed because

- 1) it *omits* a major way in which PFAS are now distributed in Vermont;
- 2) it actually *forbids* the regulation of pesticides called for by this law;
- 3) it authorizes AAFM, an agency that allows (promotes) PFAS pesticides on food crops, to advise others on how to address PFAS residues in food – a gross conflict of functions and a profound disconnect;
- 4) it won't cover important products including those used in intimate contact with young women's bodies because of the change in definition.

In addition, we see the Working Group's proposed legislation as *premature*, because the Community Engagement Plan (delegated to the Dept of Health) described in Section 8 of Act 131 (p.24) will not happen until *after July 2025*.

### **Understanding PFAS in pesticides in Vermont**

(Show Pfasinpesticides file)

Vermont is currently using at least 24 pesticides with *EPA-registered active PFAS ingredients*. Half were registered by EPA *since 2000*. Nearly half are used at over *100 pounds a year* in Vermont. See the large amounts of use. The first item, bicyclopnyrone, used at almost 500 lbs on corn, field, forage, in almost every county in VT. Prodiamine, >2000 lbs used on golf courses and lawns.

(Please show: Pyroxasulfone page.)

How do we know these pesticides have PFAS ingredients? As an example, this page shows the fully fluorinated carbon atom for pyroxasulfone herbicide. Notice the 3 F's on the left side of the diagram. In Chemistry symbols the place

where the lines between the Fs cross is a carbon atom. This is a fully fluorinated carbon atom (or molecule). PubChem database provides these diagrams. 1005 lbs of this herbicide were reported used on “corn, field, forage” in Vermont in 2022. Yes, residues of this herbicide are allowed in food.

(show Alexandrino summary)

These organo-fluorine pesticides are dangerous: they are outrageously persistent, create other fluorinated by-products, target key enzymes that are present in most living organisms and may impair important physiological processes in non-target organisms, and act as endocrine disruptors .

The truth is, VAAFV can regulate pesticides more but not less strictly than EPA. As part of the Executive Branch of VT govt, they must execute laws passed by the Legislature. But as they are heavily influenced by pesticide industry representatives, they are working to make laws easy on that industry regardless of the impacts on the state they are meant to serve.

Refusal to include pesticides containing PFAS active ingredients under the Revised Act 131 legislation is *dangerous*. It would allow the continued and possibly increased contamination of VT land, water, food, wildlife and our bodies with persistent, bio-accumulative, endocrine-disrupting toxins that make us sick. Some fluorinated pesticides contribute a toxin, trifluoroacetic acid to our waterways. I recommend your attention to the other resources listed at the end of my written testimony.

**Our Second ASK:** We propose follow-up legislation to do the following:

- 1) Pursuant to Act 154 of 2022, create a Community Engagement process to include a robust discussion of the role and dangers of fluorinated pesticides for longterm ecological and human health, open to diverse stakeholders, including grassroots activists.
- 2) Reinstate and strengthen statutes (formerly 6 VSA 1102 ff) requiring benchmarks for reduction of pesticide use and increased use of organic practices, in order to reach the Farm to Plate goal of 20% pesticide use reduction by 2030<sup>1</sup>.
- 3) Clarify in legislation that EPA-registered fluorinated pesticide ingredients are a class of PFAS to be phased out or banned in VT.

Thank you so much for this time and for your attention to our testimony as taxpayers and concerned citizens.

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<sup>1</sup> VT Agriculture & Food System Strategic Plan: Farm to Plate; 2030. Goal 7. p.20

### More resources on fluorinated pesticides:

Alexandrino, D.A.G. et al (2022). Revisiting pesticide pollution: The case of fluorinated pesticides. [Environmental Pollution](https://doi.org/10.1016/j.envpol.2021.118315) 292 (2022) 118315  
<https://doi.org/10.1016/j.envpol.2021.118315>

“The enhanced bioaccumulation potential and the nefarious ecotoxic effects in which many fluorinated pesticides have been implicated seem to suggest [that they are not safer for the environment]. Despite their undisputed attractiveness for the agrochemical market, these pesticides display a set of features that can turn them into aggressive environmental pollutants which, combined with their widespread environmental distribution, forecast an array of impacts at the ecosystem level.

Donley, N et al (2024). Forever Pesticides: A Growing Source of PFAS Contamination in the Environment. Commentary. [Environmental Health Perspectives](https://doi.org/10.1289/EHP13954).  
<https://doi.org/10.1289/EHP13954>.

“We found that the biggest contributor to PFAS in pesticide products was active ingredients and their degradates. Nearly a quarter of all US conventional pesticide active ingredients were organo fluorines and 14% were PFAS, and for active ingredients approved in the last 10 y, this had increased to ‘61% organo fluorines and 30% PFAS. Another major contributing source was through PFAS leaching from fluorinated containers into pesticide products. Fluorination of adjuvant products and “inert” ingredients appeared to be limited, although this represents a major knowledge gap.”

Jagani, R et al (2024). The Rise and Risks of Fluorinated Pesticides: A Call for Comprehensive Research to Address Environmental and Health Concerns. [Journal of Agricultural and Food Chemistry](https://doi.org/10.1021/acs.jafc.4c12827). Dec. 2024. <https://doi.org/10.1021/acs.jafc.4c12827>

“The time for action is now. We must prioritize research that bridges critical knowledge gaps, develops safer alternatives, and provides the scientific basis for sound regulatory decisions. Only through such comprehensive efforts can we hope to balance the benefits of fluorinated pesticides with the imperative of protecting environmental and human health.” This article points to the **transformation of trifluoroacetate** by several fluorinated pesticides and its **threat to water resources**.

Joerss, H et al (2024) Pesticides can be a substantial source of trifluoroacetate (TFA) to water resources. [Environment International](https://doi.org/10.1016/j.envint.2024.109061) 193 (2024) 109061.  
<https://doi.org/10.1016/j.envint.2024.109061>

“Because trifluoroacetate (TFA) is very persistent and very mobile, it will remain in the environment long after chemical management measures take place. Therefore, regulatory actions that consider all (major) TFA sources are urgently needed. The widespread use of large quantities of PPP with aTFA formation potential may be one of those sources. To date, to the best of our knowledge, PPP have not been restricted based on their TFA formation potential anywhere in the world.”

Minnesota Dept of Agriculture (2024). [PFAS in Pesticides: Interim report to the Legislature](https://www.lrl.mn.gov/docs/2024/mandated/240221.pdf). 02/01/24. <https://www.lrl.mn.gov/docs/2024/mandated/240221.pdf>

The MDA screened pesticide active ingredients registered for use in Minnesota and *identified 95 chemicals* that meet the Minnesota Law (Minn. Stat. 18B.01 subd. 15(c)) definition of PFAS, *based on their chemical structure*. Pesticide products containing active ingredients considered to be PFAS made up approximately 15% (2,163 products) of all the pesticide products registered in Minnesota in 2022.

Panieri, E et al (2022). PFAS Molecules: A major concern for the Human Health and Environment. *Toxics* 2022, 10(2), 44; <https://doi.org/10.3390/toxics10020044>.

“The unique properties of PFAS compounds has been exploited for almost 60 years and has largely contributed to their wide applicability over a vast range of industrial, professional and non-professional uses. However, increasing evidence indicate that these compounds represent also a serious concern for both wildlife and human health as a result of their ubiquitous distribution, their extreme persistence and their bio-accumulative potential.”

Sehgal, N et al (2024). Invited Perspective: The far reach of PFAS inert ingredients and adjuvants in pesticide formulations. *Environmental Health Perspectives* 2024.

<https://doi.org/10.1289/EHP15445>

“The US EPA should also strongly reconsider their risk assessment of pesticides to include human health hazards associated with mixtures of chemicals, which include inert ingredients and adjuvants added to pesticide formulations. The regulations surrounding pesticides are currently outdated and ineffective, so this discovery of PFAS presence in pesticide formulations represents a new opportunity for the US EPA to improve the scientific validity of pesticide risk assessment to better capture real-world exposure scenarios.

VAAFM website for pesticide use data:

<https://agriculture.vermont.gov/public-health-agricultural-resource-management-division/pesticide-programs/pesticide-usage-reported>

Scroll down below “Data limitations and Notes”.

“Treatment type” gives a graphic image of proportional pesticide uses in VT, but no data.

“Statewide usage” provides a list of all pesticide active ingredients used and the total amount reported used of each pesticide active ingredient. (Does not include added ingredients such as drift retardants or surfactants.)

“County usage” shows different pesticide uses within each county in VT.

NGOs with info on pesticides and alternatives:

Beyond Pesticides: Washington DC. <https://www.beyondpesticides.org/>

Pollinator Pathway: Addison County.

<https://www.pollinator-pathway.org/towns/addison-county>