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Cheryl Neimi
Hazardous Waste and Toxics Reduction Program Manager
Washington Department of Ecology
300 Desmond Drive SE,
Lacey, WA 98503

RE**:** Department of Ecology's Cycle 2, Draft Identification of Priority Products Report to the Legislature, Washington Safer Consumer Product Program
Submitted via online portal at:
https://hwtr.ecology.commentinput.com/?id=9gHGTCx2EV

Dear Mrs. Neimi:

AGC Chemicals Americas, Inc. ("AGCCA") and its parent company, AGC America, Inc. (jointly referred to herein as "AGC"), appreciate this opportunity to comment on Washington Department of Ecology's (hereinafter "Ecology") Draft Report to the Legislature and supporting draft technical documentation (hereinafter "Draft Report"). AGCCA manufactures and supplies a range of specialized industrial chemicals and materials, including resins, coatings, films and membranes, that are incorporated into a wide range of products essential to the daily lives of Washington residents and businesses. These products include coatings and paints used to protect buildings and infrastructure, among many others.

AGC is particularly concerned with the identification of "architectural paints" as a priority product for PFAS content, under Cycle 2 of the Safer Products for Washington Program. In the Draft Report, Ecology defines the priority product to include "architectural coatings intended to be applied to the interior and exterior surfaces of buildings" including paints intended for both non-professional and professional users. Ecology further explains that the category includes "paints, primers, and clearcoats such as varnishes or lacquers." We urge Ecology to further clarify the proposed product category, to specify that it covers coatings intended to be applied to residential buildings, but **not** coatings used on infrastructure such as bridges, water towers, and transmission towers, or monumental structures such as airport terminals, train stations, and sports and entertainment arenas.

As discussed in greater detail below, certain architectural paints are formulated with fluoropolymers. Although fluoropolymers fall within the extremely broad definition of "PFAS" in RCW 70A.350.010, they are very much *different than* the PFAS chemicals that have been found in drinking water, groundwater and biosolids, such as PFOA and PFOS. For example, unlike

those PFAS chemicals of concern, fluoropolymers are not soluble in water, so they cannot enter drinking water or groundwater. Furthermore, fluoropolymers do not degrade into smaller, water-soluble molecule, are not bioavailable, nor do they degrade to smaller, bioavailable molecules, so they do not present toxicity concerns associated with PFAS chemicals of concern. Indeed, peer-reviewed studies demonstrate that, because of these and other characteristics, fluoropolymers satisfy internationally-recognized criteria for being "Polymers of Low Concern" (PLC) -- i.e., polymers deemed to have insignificant environmental and human health impacts.[1] Due to these unique characteristics, architectural paints containing fluoropolymers pose minimal risk.

In the draft technical documentation, Ecology acknowledges that fluoropolymer-based paints "can be used in applications where anti-corrosion resistance is needed due to harsh conditions of use (salt, moisture, corrosive chemicals)." As detailed in a white paper on fluoropolymer coatings prepared by the Performance Fluoropolymer Partnership (White Paper),[2] fluoropolymer-based coatings provide those performance benefits and many others, including several that are essential for infrastructure applications. For example, fluoropolymer-based coatings have an erosion rate that is roughly 50 percent lower than other coatings used in infrastructure applications, which, in part, is why fluoropolymer based coatings have a life expectancy of 50 years or more in many settings compared to 20 years or less for alternative technologies.[3] Similarly, fluoropolymer coatings have been shown to be resistant to UV light, which provides them with superior resistance to chalking and fading.[4] Because fluoropolymer-based coatings last at least two to three times longer than alternative coatings, structures with fluoropolymer-based coatings need to be repainted and maintained much less frequently, which results in substantially reduced exposures to people and the environment, compared to alternative coating technologies. Indeed, the Organization for Economic Cooperation and Development (OECD) indicates that due to the superior weather- and corrosion resistance of fluoropolymer-based coatings, bridges painted with fluoropolymer paints are expected to require repainting only once every 60 years.[5]

In deciding whether to designate a priority product under the Safer Products for Washington law, Ecology must consider the potential for the priority chemical to be found in the environment "with priority given to surface water, groundwater, marine waters, sediments and

[1] See "A critical review of the application of polymer of low concern regulatory criteria to fluoropolymers II: Fluoroplastics and fluoroelastomers," Korzeniowski, Stephen H., et al., Integrated Environmental Assessment and Management 19, 2 (2023): 326–354. DOI: 10.1002/ieam; "A Critical Review of the Application of Polymer of Low Concern and Regulatory Criteria to Fluoropolymers," Integrated Environmental Assessment and Management, Henry, Barbara.J., et al.,14, 3 (2018): 316-334. DOI: 10.1002/ieam.4035.

[2] https://fluoropolymerpartnership.com/wp-content/uploads/2023/12/PFP-White-Paper-on-Fluoropolymers-in-Infrastructure-and-Construction.pdf (hereinafter, "*White Paper*").

[3] *Id.* at 8.

[4] *Id.* at 12.

[5] OECD, *Per- and Polyfluoroalkyl Substances and Alternatives in Coatings, Paints and Varnishes (CPVs), Report on the Commercial Availability and Current Uses*, OECD Series on Risk Management, No. 70, Environment, Health and Safety, Environment Directorate, OECD, (2022) at 63.

other ecologically sensitive areas" when the product is used, disposed, or has decomposed.[6] Since, as noted above, fluoropolymers are not water soluble and do not degrade into water soluble molecules, they cannot migrate to surface waters, groundwater, or marine water. Because fluoropolymers in paint are insoluble in water and because fluoropolymer-based paints are highly resistant to erosion fluoropolymers are highly unlikely to be found in the environment (including surface waters, groundwater, or marine water) when fluoropolymer-based paints are used or disposed.

In addition to examining environmental presence, Ecology is also required by the Safer Products for Washington law to evaluate the potential for exposure of the priority substance to sensitive human populations or species when the product is used, disposed or has decomposed.[7] As noted, fluoropolymer coatings are highly resistant to abrasion (and the formation of dusts) and fluoropolymers in coatings are non-volatile and non-soluble in water. Moreover, they are non-bioavailable. Because of these properties, it is highly unlikely that use or disposal of fluoropolymer-based paints would result in exposures to sensitive populations or species. Furthermore, Ecology has not identified actual exposure to fluoropolymers caused by architectural paint in its Draft Report. Instead, without attempting to distinguish between fluoropolymers and other PFAS chemicals, Ecology merely notes that PFAS chemicals are contained in paints and asserts that such paints could contribute to PFAS-containing dust. However, in addition to their resistance to abrasion, fluoropolymer-based paints have negligible potential to contribute to PFAS-containing dust due to the matrix-effect of having fluoropolymers bound into a matrix. In fact, exposures may actually be reduced, compared to alternative coatings, due to extended service life and longer (less frequent) recoat time intervals provided by fluoropolymer-based paints. Fluoropolymer paints are also professionally applied in a controlled manner to minimize worker risk and do not present potential for risk to residential painters. In summary, exposure potential is negligible.

Finally, the statute directs Ecology to consider the volume of products made with the priority chemical as well as the availability and feasibility of safer alternatives. According to the OECD, the overall market penetration for fluoropolymer-based architectural coatings is "very low" comprising just 1% of the market for architectural protective coatings – suggesting that fluoropolymer-based architectural coatings are utilized only when needed for their superior weatherability, durability and resistance to UV deterioration and degradation.[8] In addition, substantial evidence indicates that there are no available alternatives that provide the same degree of protection as fluoropolymer-based architectural paints, which is essential for critical infrastructure. For example, OECD points to several studies which show that alternatives to fluoropolymer-based coatings suffer from "much higher degradation" and demonstrate much lower weatherability and durability than fluoropolymer coatings.[9] Similarly, data presented in the PFP White Paper indicate that fluoropolymer-based coatings used in outdoor applications

[6] RCW 70A.350.030(2)(d).
[7] RCW 70A.350.030(2)(c).
[8] OECD, *Per- and Polyfluoroalkyl Substances and Alternatives in Coatings, Paints and Varnishes (CPVs), Report on the Commercial Availability and Current Uses*, *supra*, at 11; 21; 60.
[9] *Id*. at 55-56.

degrade at 1/20th the rate of non-fluoropolymer alternative coatings and have a theoretical life of greater than 100 years, compared to less than 15 years for non-fluoropolymer alternative.[10] Furthermore, the superior protection and significantly longer life provided by fluoropolymer-based paints results in much lower carbon and VOC emissions and less generation of waste than available alternatives.[11]

Therefore, AGC requests that Ecology amend the draft report to the legislature and supporting technical document to remove fluoropolymer-based paints from the scope of covered products included in "architectural coatings." Covered products should also have an express exclusion, similar to the automotive paint exclusion already incorporated, for coatings used to preserve critical infrastructure and monumental structures.[12]

AGC appreciates Ecology maintaining open communication with stakeholders as it continues to develop the Safer Products for Washington Program. AGC is eager continue to work with Ecology towards implementing an effective program, based on a clear and accurate understanding of products causing contamination and their impact on health and the environment.

Regards,

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[10] *White Paper* at 53.
[11] *Id.* at 38-40.
[12] Cycle 2 Technical Report Regarding Selection of Priority Products, p. 87.