March 2, 2020

Mr. Kenneth Zarker
Director
Hazardous Waste and Toxics Reduction Program
Washington State Department of Ecology
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The Case Against Making Printing Inks A Priority Consumer Product Under Chapter 70.365 RCW

Dear Mr. Zarker:

These comments are being submitted today by the Color Pigments Manufacturers Association of North America on behalf of businesses and industry trade associations in the color pigments industry value chain. We appreciate the opportunity to offer observations and formal recommendations on the Priority Consumer Products Draft Report to the Legislature authored by the Washington State Department of Ecology (January 2020).[1]

We appreciate the efforts of employees at the Department of Ecology (ECY) who have been tasked by the state legislature to develop and implement a new law that is based upon many diverse and inconsistent factors, in which political and policy considerations conflict with well-established scientific, technical and economic considerations, as well as laws and regulations governing products in commerce in the United States. The policy considerations in this draft report reflect adherence to a very narrow set of beliefs inherent in specific ideological constituencies, and are inconsistent with United States, North American and global scientific practices and technical knowledge about the printing ink industry.

Inks and Pigments Category

The Department of Ecology should review Chapter 70.365 RCW and US Department of Commerce regulations for clarification of the phrase "consumer products" as it pertains to printing inks. While we concur that printing inks, in some instances can be viewed as consumer products, such as those purchased for desktop printing applications, most inks are used in commercial printing applications. Color pigments are separate and distinct raw materials used in the manufacture of printing inks, as are solvents, additives, binders, and adhesives. Simply put, consumers do not purchase or use color pigments. It would be more appropriate, for purposes of this draft report, to distinguish between the commercial product (printing inks) and the raw materials for printing inks.

[1] Available at https://fortress.wa.gov/ecy/publications/documents/2004004.pdf.

At the October 2019 Workshop in Spokane sponsored by the Spokane River Regional Toxics Task Force and the Washington State Department of Ecology, representatives of the North American printing ink industry provided technical and scientific information on processes for manufacturing printing inks, diverse applications of printing inks across commercial markets, Federal government regulations governing the manufacture and use of printing inks, and technical information about printing inks raw materials. One of the raw materials, or intermediates, used to manufacture printing inks is color pigments.

The phrase "up to 56 million pounds of printing ink are used per year in Washington" has not been verified by specific citations or references to recognized economic statistics, such as US Department of Commerce information. The Department should identify and review statistically valid economic studies to determine a more specific number for volumes of printing ink used in commerce in Washington State. The Department's recent webinar specifically defined printing ink in commerce – commercial printing companies, for example – and excluded all articles in commerce, including packaging, newsprint, marketing pieces/mailers, etc.

Priority Product Summary

The statement "Printing inks are a significant source of inadvertently generated PCBs" is not based upon specific scientific research that would make such a statement correct. Rather it might be more accurate to state that printing inks are the sole product identified by Washington State Department of Ecology as containing PCBs.

The statement "Several bodies of water in the state are considered impaired due to PCB contamination" has no linkage or relationship with printing inks. Washington State has yet to conduct or cite any peer-reviewed scientific research identifying and validating any adverse impacts on bodies of water directly attributable to PCBs from printing inks. Rather, Washington State Department of Ecology documents such as the PCBs chemical action plan[2] correctly identify, based upon actual studies, that 97.0 % of PCBs in Washington State waterways are derived from legacy products that were never banned or removed when the Federal government implemented its ban on commercial manufacturing of products using PCBs as a raw material.

The sentence "Ecology estimates that color pigments contained in inks are the largest source of inadvertent PCB contamination in consumer goods" is similarly incorrect, since there have been no direct data studies linking printing inks to "contamination" of consumer goods. To the contrary, FDA regulations governing food contact packaging explicitly identify approved applications for printing inks in food contact packaging. The department should further clarify the context for using the word "contamination," as well as what is defined as "contamination."

Background

This section correctly indicates that PCBs have been intentionally (and legally) used as components of consumer products such as electronic equipment, caulking, and carbon copy paper. Transitioning from known legacy sources, and their impacts within Washington State, to the topic of inadvertent PCBs, minimizes the impacts of legacy products, in an effort to build a case in the absence of data.

[2] Available at https://fortress.wa.gov/ecy/publications/documents/1507002.pdf.

The statement "iPCBs are the predominant source of new PCBs in consumer goods" does not factor in the presence of all raw materials used in the manufacture of consumer goods. For example, presentations at the Spokane River Regional Toxics Task Force have recently shown that peroxide polymer initiators create iPCBS. More detailed analysis on the sources of iPCBs is required by the Department to develop a complete understanding of the issue as no information on other sources and a ranking of those sources has been presented.

Estimated volume of PCBs used in printing inks

This section extrapolates information and conclusions from papers prepared by several non-governmental organizations (NGOs) for the Spokane River Regional Toxics Task Force. CPMA and other industry associations have reviewed such documents and offered comments and suggested corrections in an effort to eliminate inaccurate information, and hypothetical conclusions, so as to improve the accuracy and conclusions of these papers. The focus shifts from printing inks to color pigments, rather than the many components of printing ink manufacturing, and continues to repeat inaccurate statements extrapolated from these papers. One such statement is "printing inks are the predominant use of pigments," which is not accurate.

The table used in this section clearly demonstrates that PCB concentrations are statistically insignificant (parts per billion), and therefore contradict the opening statement that "printing inks are a significant source of inadvertently generated PCBs." Having a thorough analysis of other products containing PCBs along with their relative concentrations would allow for a more accurate representation of all of the sources of iPCBs.

Estimated volume of printing inks used in Washington State

Since the Department has clarified that this report only focuses on printing inks found in commercial printing operations, and not articles in commerce, the use of printing ink production becomes statistically irrelevant for this draft report. The use of gross (quantitative) printing ink data is both confusing and misleading. As noted earlier, the statement "up to 56 million pounds of printing ink are used per year in Washington" is not substantiated by specific economic data. In fact, specific, accurate and verifiable ink production figures (national or state) are not available. There is no data on the types of color pigments used by printing ink manufacturers, and no data on sources of printing inks purchased by individual printing companies.

Printing ink under normal usage condition is not discharged directly into water bodies. Commercial and packaging printing inks are an industrial product (much like a Boeing airplane) and are not sold to the public. Commercial printers of all types operating in the State of Washington may produce packaging and other printed materials for national and international customers, and not specifically for use within Washington State, and hence, there is no methodology to compute "exposure," however it may be defined, from such production figures.

The US Bureau of the Census 2017 indicates there were 480 Washington State printing establishments, and that there were 23,881 such companies nationwide. These facilities represented 419,694 employees nationwide and 5,286 employees in Washington State. There is no direct correlation, however, between employees in printing facilities and global or national ink production data.

Potential for exposure to sensitive populations when used

The phrase "Nearly all people, including infants, are exposed to PCBs" could mean that certain populations "may" be exposed to legacy sources of pigments, for which this draft report is not relevant. The definition of exposure, which is one of the two components of risk, has not been determined or statistically validated in the draft report. Since this is not a risk assessment analysis specific to Washington State, references to academic studies conducted for other purposes are not relevant to the objectives of the draft report. In particular, the reference to airborne PCBs is not from research specific to Washington State. One of the well-known scientific findings from studying volcanic activity is that it is a source of atmospheric PCBs. There is the opportunity, therefore, to conduct research in Washington State on airborne sources of PCBs (such as PCB-11), and specifically to identify impacts of historical volcanic eruptions, such as Mt. St. Helens, on the creation of PCBs in Washington State. Underground volcanic activities should also be studied as a possible source of PCBs in waterways.

Potential for exposure to sensitive species when used

The Department should clarify the definition of "sensitive species" and incorporate findings of its own Washington State water quality studies and the Spokane River Regional Toxics Task Force, which have consistently determined that PCB-11 does not bioaccumulate in salmon. One of the observed deficiencies of this section is that its content has limited or little relevance to commercial printing inks. The Department should endeavor to make a scientifically and technically valid case demonstrating linkage between "sensitive populations" and commercial printing inks in Washington State.

In addition, the routes of exposure are virtually all speculative. The only known route of exposure would be iPCBs that are discharged to the rivers from wastewater treatment operations and paper recycling operations. The source from the paper recycling operations can be tied, in part, to the inks on the paper being recycled. The sources of other iPCBs have not been studied or verified.

At the October 2019 Workshop in Spokane sponsored by the Spokane River Regional Toxics Task Force and the Washington State Department of Ecology, representatives of the North American printing ink industry provided references indicating that PCB-11 can be a byproduct of degradation of other higher molecular weight PCBs. This data alone indicates that printing inks are not the sole source of iPCBs that are being detected in wastewater discharges and other sources flowing into the rivers in Washington State.

Existing regulations

The final report should note that Washington State laws, regulations and policy initiatives on the topic of PCBs are inconsistent with North American (USA, Canada, Mexico) and global laws, regulations and policies. PCB-11, the subject of focus by Washington State government agencies, is not considered a PCB by any national government other than the USA. Global and North American regulatory standards for inadvertent PCBs have been confirmed as meeting health and safety requirements for all populations. Printing ink manufacturing is regulated by U.S. health and safety laws administered by OSHA and EPA (and Washington state) under the OSH Act, CAA, CWA, TSCA, etc.

The Department of Ecology has been charged with producing a draft report to the Washington State legislature on the implementation of the Safer Products law. We encourage the Department to consider development of more relevant and reliable economic and commercial data, especially where significant data gaps currently exist, before submitting a final report to the state legislature in June 2020. We look forward to assisting the Department in this endeavor.

Respectfully submitted,

David J Wawer
Executive Director

On behalf of:

Color Pigments Manufacturers Association
National Association of Printing Ink Manufacturers
American Coatings Association
Specialty Graphics Industry Association