



Kia Canada Inc.
180 Foster Crescent,
Mississauga, Ontario L5R 4J5

July 13, 2022

Christina Paradiso
Executive Director Chemicals Management, Environmental Protection Branch
Department of the Environment
351 Saint-Joseph Boulevard, Gatineau, Quebec K1A 0H3
Via Email: interdiction-prohibition@ec.gc.ca

Re: Notice of Objection and Request for Board of Review in relation to proposed regulations* prohibiting the manufacture, use, sale and import of decabromodiphenyl ethane (DBDPE, CAS Registry Number 84852-53-9)

**Canada Gazette, Part I, Volume 156, Number 20 - May 14, 2022: Prohibition of Certain Toxic Substances Regulations, 2022*

Dear Ms. Paradiso:

Kia Canada Inc. ("Kia"), is taking the extraordinary step of submitting this Notice of Objection to the regulatory proposal published in the Canada Gazette on May 14th, 2022 which includes, amongst the proposed amendments to the Prohibition of Certain Toxic Substances Regulations, very targeted measures against the manufacture, use, sale and import of DBDPE.

Kia notes the proposed risk management measures as set out in the proposed Prohibition of Certain Toxic Substances Regulations, 2022 (the "draft Regulation") for DBDPE are not replicated elsewhere in the world, and far exceed anything thus far proposed in terms of banning of the substance from manufacture and commerce. The automotive industry, including Kia, has made a consistent effort over the past three or more years to make it known to the department the critical importance of this substance to industry; DBDPE is a vital and broadly used additive to many materials in use in automobiles and automotive parts and provides protection from fire to drivers and occupants in hundreds of millions of vehicles worldwide.

Proposed restrictions on the other named substances notwithstanding, Kia considers the measures concerning DBDPE to be wholly incompatible with the current state of its broad global usage. Kia's primary concerns, which underpin the filing this Notice of Objection (as provided for under section 332(2) of CEPA 1999), and the resulting request for formation of a Board of Review to thoroughly assess the risks posed by DBDPE along with the appropriateness of the respective proposed amendments to the PCTSRs (pursuant to section 333 of CEPA 1999), are outlined below (with further detail to follow later in this letter):



- Potential for severe negative impact to public safety as a result of lack of available substitutes
- Insufficient timelines to develop, qualify and implement potential substitutes in sufficient volume to address broad scope of applications
- Proposed permitting process is not adequate to address lack of viable alternatives to DBDPE
- Trade and supply-chain disruption arising from global non-alignment caused by decision to pursue independent Risk Management measures

Potential for severe negative impact to public safety as a result of lack of available substitutes

DBDPE serves an essential function by controlling the flammability of the products where it is used. Automobiles and automotive parts that contain this substance do so because, in the absence of the chemical, there is an increased risk of fire that could result in injury or death to vehicle occupants and/or other road users which may be involved in an incident. In Kia vehicles, the substance is used extensively in electrical and electronic components, including wiring. We note that the Department is also advocating for a Federal Zero Emission Vehicle (ZEV) Mandate - vehicles which by their nature require extensive use of electrical and electronic components and wiring.

Automobiles are manufactured in accordance with application-specific performance standards, including flammability of interior materials (Canadian Motor Vehicle Safety Standard 302 - Flammability of Interior Materials) and an array of standards governing electrical componentry, of which there is an ever-increasing quantity in vehicles. As vehicles evolve further into platforms for lifestyle mobility, as well as a mandated shift towards electrical powertrains, the mass of electronics and wiring will likely continue to grow and, with it, the need for effective flame retardants. A sensible transition plan that preserves the safety of vehicle owners and occupants, while substitutes are adequately researched and tested, is vital.

In consideration of the measures being proposed for DBDPE, it is important to take note of the risk management measures already introduced for chemicals that have performed similar functions in the past and which have been phased out, though largely in alignment with global agreements and regulations. Two such examples, HBCD and the PBDE known as decaBDE, have been subject to restrictions in manufacture, use, and commerce over the past decade, and the phase-out of these substances has forced manufacturers to rely increasingly on chlorinated and brominated flame retardants such as DP and DBDPE, respectively. With DP being removed from commerce, the suite of known flame retardants which are available to vehicle manufacturers and qualified for use in various applications is growing increasingly small and the process to find alternatives becoming increasingly challenging. The few remaining alternatives that may be able to fill the gap in some applications are likely to require much higher loading factor in parts and this will result in increased material weight as well as - potentially -



negatively impact other material properties. At a time where our industry is moving towards vehicles with lower GHGs emitted per mile, and greater efficiency of the use of electrical energy stored on-board, this higher loading factor of substitutes, and associated increases in vehicle mass, presents a unique challenge.

As an additional point, a particular concern with the regulatory proposal concerns the statement in the Regulatory Impact Analysis Statement that “there is the potential for bioaccumulation of DP and of DBDPE’s transformation products (i.e. lower brominated diphenyl ethanes) in wildlife, such as whales and seals”. The determination to use decaBDE as a structural analogue for DBDPE does not - according to our chemical partners - appear to have broad support in empirical research; establishing this “potential” as actual fact appears to us step that should precede implementation of a ban that can have fire safety implications for vehicle occupants.

Insufficient timelines to develop, qualify and implement potential substitutes in volume to address broad scope of applications

Each manufacturer, including Kia, has thousands of parts affected by the proposed regulations, with applications including, but not limited to wiring, tape adhesives, seat foams, and lacquer on labels and cables. There are, at present, no other alternatives to DBDPE that offer the same level of flame retardancy, at the current substance loading, while possessing comparable electrical resistance, physical properties, and processing advantages. Additionally, alternatives always carry their own set of performance limitations and risks, and it is the balance of risks that must be well-understood and carefully managed when there are other competing safety priorities such as with respect to fire safety.

In the Regulatory Impact Analysis Statement, the Department suggests that its consultations with industry stakeholders have led to the proposed permits and exemptions that would address the lack of available alternatives to DBDPE. However, as our members and their supply chain partners would be the source of such information, and as no comprehensive picture has yet been developed concerning the consequential costs of the proposed risk management measures to our industry (owing, in large part to the enormous complexity of obtaining such information across the global supply chain where DBDPE use is not actively monitored), we have concerns as to the accuracy of this statement.

The timelines for qualifying substitute candidates on a part-by-part basis for integration into production plans of new models and, critically, existing models, is much longer than the 5-year exemption window being proposed for new vehicles (less than the development cycle for a single model). Even if a compound were identified as a candidate substitute for each of the tens of thousands of related parts, it would not only have to pass the flammability resistance test but also be qualified more broadly for the application. Vehicle parts must be developed and tested to meet engineering specifications, and then the systems developed and tested to ensure that



Kia Canada Inc.
180 Foster Crescent,
Mississauga, Ontario L5R 4J5

they meet not only the company's engineering specification (i.e. performance at temperature extremes, fatigue resistance, forming during manufacturing, etc.), but also satisfy certification requirements (ie. crash testing performance, flammability, etc.) of various global regulatory regimes. Once approved, the new substance must be integrated into the production pipeline, which becomes all the more complex for product lines already established and takes engineering resources away from the development of newer, safer, and more-energy-efficient vehicles. Figure 1 in the Appendix to this letter illustrates the scope of consideration for evaluating new chemicals.

In the past, our guidance to government on chemical substance phase out has been 10 years for new products; however, with no existing regulatory action against DBDPE elsewhere in the world, 15 years is required to substitute DBDPE in new vehicle production to ensure adequate time to research and implement a substitute with minimal supply chain disruption. For a graphical illustration of the automotive timeline for chemicals substitution, please refer to Figure 2 in the Appendix to this letter.

Proposed permitting process not adequate to address lack of viable alternatives to DBDPE

The proposed permitting process is not workable for the automotive industry; the requirement for obtaining a permit is very burdensome from an administrative standpoint when considering the exceedingly high number of specific parts that would need to be independently tested and permitted under such a system. It is very difficult to peg the combined administrative, testing and development, and per/vehicle costs for qualifying and integrating a suitable alternative to DBDPE, but it is likely to have an impact in the billions of dollars when measured across the entire sector, when including OEMs and their suppliers' base.

Additionally, ECCC has indicated, through the public consultation process, that the permitting mechanism is not applicable for uses which have been granted an extension within the proposed rule. Automotive OEMs would therefore not be able to avail themselves of this mechanism for the purpose of additional development time.

Trade and supply-chain disruption arising from global non-alignment caused by decision to pursue independent Risk Management measures

Automobile manufacturers operate in a global regulatory environment the scope of use of DBDPE in the industry is such that it cannot be substituted across the length and breadth of the global supply chain without a substantial lead time for new parts and new vehicles, as well as replacement parts. These components, and finished vehicles, are not only entering Canada in volume but, in the case of some OEMs, being produced here as well and exported either for final assembly or as part of another finishing process that could see the part returned to Canada again. A short lead ban on DBDPE means OEMs may be faced with a decision to stockpile



Kia Canada Inc.
180 Foster Crescent,
Mississauga, Ontario L5R 4J5

parts rather than produce them in accordance with real-time production estimates for the production lifecycle of affected models; this is itself not beneficial to the environment. A poorly timed phaseout would also likely result in Canada-unique specifications for vehicle assembly (impacting vehicle availability and costs to the Canadian consumer) and disrupt movement of parts that often cross the border multiple times for successive operations.

In North America, the philosophy of Canada-US alignment on vehicle emissions and safety standards is a cornerstone of the industry's viability. The Canada-US-Mexico Agreement obliges parties to the agreement to not introduce unnecessary barriers to trade, but to make efforts to align risk-assessment methodologies and risk management measures for chemical substances. In the case of Kia, the Canada Korea Free Trade Agreement includes an Initial Environmental Assessment where concerns over risks to future employment and production opportunities in high-value manufacturing industries, such as automotive assembly and parts, were identified. We therefore are very concerned with the department's willingness to expose the Canadian industry to such an enormous commercial risk by moving independently to restrict DBDPE. At present, the United States Environmental Protection Agency (U.S. EPA) is not proposing either Risk Assessment or Risk Management of DBDPE. On the global front, the Stockholm Convention on Persistent Organic Pollutants is similarly absent of DBDPE with respect to the chemicals listed in its Annexes. A global approach to chemicals management is critical to the automotive industry, as it is with other industries that operate in a global regulatory environment that governs design, production, certification, in-use testing, distribution, end of life and other product safety considerations. We therefore urge the government to make its arguments for DBDPE's removal from commerce to international forums for establishing such global agreements, such as the Stockholm Convention.

To summarize, Kia is greatly concerned with the proposed regulatory Risk Management measures for DBDPE. It is not sufficient for the Department to simply "hope" that industry will come up with a viable alternative to DBDPE, while putting an effective end to its use over a very short timeline in the context of vehicle development cycles. Automobiles are highly complex manufactured items. Under CEPA 1999, as the industry has made clear on many previous occasions, there is a responsibility on the part of the government to ensure that viable alternatives exist for industry to use that will allow them to fulfill their other regulatory obligations.

Given the current lack of available alternatives for DBDPE and unknown costs of compliance with the regulatory proposal, we urge the Department to revise its risk management approach in regulating DBDPE to, first, engage other jurisdictions in global-focused chemicals management approach and, secondly, ensure the industry has adequate time to work with its supply chain partners to properly develop and implement workable alternatives.



Kia Canada Inc.
180 Foster Crescent,
Mississauga, Ontario L5R 4J5

We thank you for your consideration of the arguments set out above, and request that the Minister appoint a Board of Review to inquire into the risks posed by DBDPE and the appropriateness of the respective proposed amendments to the PCTSRs.

Sincerely,

A handwritten signature in black ink, appearing to read 'George Bousioutis', is written over a light blue horizontal line.

George Bousioutis
Government Affairs, National Manager
Kia Canada Inc.