ServiceWireCo.
Manufacturing quality. Delivering service.

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ISO 9001

Mail/Courier:
IMDC July 7, 2022 (informed of the letter) GICD

July 1, 2022

The Honourable Steven Guilbeault
Minister of the Environment
c/o Christina Paradiso
Executive Director Chemicals Management, Environmental Protection Branch
Department of the Environment
351 Saint-Joseph Boulevard, Gatineau, Quebec K1A 0H3
Email: ec.interdiction-prohibition.ec@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) while providing exemptions to the prohibitions, *Canada Gazette,* Part I, Volume 156, Number 20 – May 14, 2022: Prohibition of Certain Toxic Substances Regulations, 2022.

Service Wire Co. is a North American manufacturer of electrical wire and cable whose products help to power Canada's economy and economic growth. Our focus on industrial wire and cable, along with renewable energy cables such as photovoltaic conductors, directly aid the continuing development of Canada and its shift to renewable energy sources.

Today we write to you to express our formal objection to the above-referenced regulatory proposal. This ban will directly impact products provided by Service Wire Co. (and all other foreign wire and cable manufacturers, as well as ultimately Canadian wire and cable manufacturers), including its XLPE cable and its photovoltaic wire, both of which include DBDPE.

The ban will also negatively impact the Canadian economy, immediately resulting in inadequate cable supply for new construction and renovation. Additionally and contrary to the regulators' intentions, the Canadian environment will be negatively impacted by the prohibition for at least three reasons: (i) during the grace period, the concentration of manufacture of cables including DBDPE for use in Canada will be *exclusively* in Canada, (ii) installers will turn to materials known to have a detrimental effect on the environment, such as PVC, and (iii) as photovoltaic wire becomes inaccessible it eliminates incentives to move to renewable power.

As provided for by section 332(2) of CEPA 1999, our company is filing this Notice of Objection and respectfully request that a Board of Review be established,

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pursuant to section 333 of CEPA 1999, to "inquire into the nature and extent of danger" posed by DBDPE for the reasons set out below.

Proposed Risk Management Measures May Lead to Severe Risk to Public Health and Safety

Decabromodiphenylethane (DBDPE) is the most widely used acceptable flame retardant that, when used in conjunction with antimony trioxide synergists, provides for exceptional flame retardancy in many polymers. This exceptional performance, in turn, protects life and infrastructure from potential damage in the event of a fire.

Exceptional flame retardancy in electrical conductors and cables is mandated by the CEC (Canadian Electrical Code) for many applications. Further, given Canada's climate (potential for extreme cold), cross-linked polyethylene (XLPE) insulations offer many advantages to flexible PVC insulations. These include substantial improvements in electrical performance, physical resilience, and enhanced short-circuit performance. However, these compounds use DBDPE as their required flame performance additive. DBDPE has the additional advantages of maintaining high flame performance while also not impacting the insulation electrically, physically, or with regards to low temperature performance.

Alternatives to DBDPE currently have several disadvantages. For compounds such as aluminum trihydrate or magnesium hydroxide, the insulation systems become very expensive, suffer from reduced electrical performance, and are far less flame retardant. Other compounds, which are admitted near-chemical clones of DBDPE, suffer these same limitations while also being unproven over time and potentially worse for both the environment and human health. In essence, the replacement may be more detrimental to human health and safety and the environment than the current compound.

Likely, if DBDPE is prohibited, significant wire and cable installations in Canada would shift back to the poorer performing (and much less environmentally sensitive) PVC insulations. Therefore, it is our opinion that prohibiting the use of DBDPE in wire and cabling will have an immediate degrading effect on the overall performance of the electrical infrastructure in Canada.

Proposed Risk Management Measures for DBDPE are Not Aligned with Other Regulatory Agencies or Agreements

The proposed risk management measures as set out in the proposed Prohibition of Certain Toxic Substances Regulations, 2022 (the "draft Regulation") for DBDPE are an outlier globally. No regulatory authority in the world has proposed

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risk management measures as sweeping as those set out in the draft Regulation. Canada is acting alone to prohibit DBDPE. By way of example, the United States Environmental Protection Agency (U.S. EPA) is not currently conducting a risk evaluation for DBDPE and is not contemplating risk management measures.

ECCC has noted that Canada is a party to the Stockholm Convention on Persistent Organic Pollutants (POP), and that the proposed risk management measures would allow Canada to meet "its international commitments implementing amendments to the Stockholm Convention." Yet, DBDPE is not listed as a POP under the Stockholm Convention. ECCC also cites meeting the goals of the Great Lakes Water Quality Agreement as a justification for its proposed risk management measures, even though DBDPE is not listed as a Chemical of Mutual Concern as part of the agreement. Accordingly, neither rationale justifies the proposed risk management measures.

Last, the Final Screening Assessment of DBDPE (the "Final Screening Assessment") published in the May 11, 2019 Canada Gazette, Part I, as well as the Proposed Order to add the substance to Schedule 1 of the Canadian Environmental Protection Act, 1999 published in the June 29, 2019 Canada Gazette, Part I Notice, and the subsequent draft Regulation are inconsistent with the U.S.-Mexico-Canada Agreement (USMCA), which requires a risk-based approach to chemical regulations.

Any risk management measures for DBDPE need to align with other national and international regulatory bodies and with international agreements to avoid potential unintended consequences that could negatively affect Canadian consumers and businesses operating in Canada.

Proposed Risk Management Measures May Lead to Supply Chain Disruptions

Product manufacturers operate in a global regulatory environment and must take into account a broad range of product safety and design factors. This includes considerations related to product certification, performance, use and end of life, and even chemical registration. These regulatory, design, and performance requirements are addressed through a complex global supply chain for components and subcomponents.

A 2020 socioeconomic study commissioned by ECCC on DBDPE in the Canadian market noted that "at this time, effective fully tested alternatives are not currently known for many critical applications." ECCC suggests that its consultations with industry stakeholders have helped it develop permits and exemptions to address the lack of available alternatives to DBDPE. However,

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these permits and exemptions are insufficient in addressing the lack of available alternatives for DBDPE. ECCC notes several times during the draft Regulation that there is a lack of data and certainty regarding cost and availability of alternatives to DBDPE for some critical applications, and consequently that compliance costs have not been estimated for proposed risk management measures affecting wire and cable, automotive products, and other applications.

The engineering and certification of products is a time-consuming process that can take years, and there are considerable financial costs involved in this effort. Our company designs products to meet relevant safety standards and to be safe when used as intended. Given the lack of available alternatives for DBDPE and unknown costs of compliance with the regulatory proposal, ECCC must revise its approach in regulating DBDPE to avoid disruptions to an already overburdened supply chain.

Specific to the wire and cable industry, DBDPE is in expansive use worldwide with no current restrictions, and many countries are converting to XLPE (containing DBDPE) to move away from flexible PVC insulations. Therefore, companies exporting into Canada would have to maintain dual stock, including both the superior XLPE products and the replacement products which may be developed to withdraw DBDPE, possibly with little motivation to do so. Likely, most will not. In the meantime and during the grace period, Canadian wire and cable manufacturers will have to manufacture *all* of the XLPE products for the Canadian market. Once the prohibition is applied to the Canadian manufacturers, these companies would be unable to manufacture and therefore export competitive products into foreign markets.

Notably, potential conversion of the product, if possible, would be extensive and time consuming. For a wire and cable company, conversion is not simply submitting the insulation system to CSA or UL for listing. Conversion would also require submittal of all fabricated finished cables that use the conductors containing the new insulation system. This process (for example, qualifying Power and Control Tray Cable) can take upwards of 18 months at a cost approaching $30,000 USD, and would be required for each type of cable system. During this multi-year process the Canadian wire and cable industry will be the only supplier of XLPE cable and photovoltaic wire to the Canadian market, creating a dearth of cable and wire in Canada over the years that wire and cable importers to Canada are developing alternative products, should they be so motivated. The impact on new construction and renovation would be significant, and Canada's move to renewable power would be stifled.

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Final Screening Assessment for DBDPE Ignores the "Weight of the Evidence"

Section 76.1 of Canada Environmental Protection Act (CEPA) requires equal weight in the application of both the weight of evidence and the precautionary principle in conducting the evaluation of the scientific evidence relating to any particular substance. Section 76.1 does not give precedence to either of these two principles. The application of the precautionary principle is not stated or intended to govern decision-making.

The conclusion reached in the Final Screening Assessment that DBDPE has the potential to transform into lower brominated products that could pose a risk to aquatic organisms conflicts with the proper application of the weight of evidence approach and has not been substantiated. ECCC reached its conclusion regarding the potential for breakdown of DBDPE based on a theory that the DBDPE would behave in the same way as another flame retardant, decabromodiphenyl ether (decaBDE). That conclusion is inconsistent with the available evidence on DBDPE.

The approach taken by ECCC is contrary to the statutory requirement to apply the weight of evidence approach. DBDPE is very different scientifically and structurally than decaBDE. Thus, the use of decaBDE as a proxy for DBDPE in computer modelling to draw this conclusion of potential breakdown products in the absence of any supporting studies is not appropriate and based on faulty assumptions given their different molecular structures.

The Conclusions of the Final Screening Assessment upon which the Proposed Risk Management Measures for DBDPE Rely is not Supported by the State of the Science

ECCC notes for the Final Screening Assessment that "given the available information on potential human health effects, DBDPE is not a concern for human health." [1] A comprehensive list of 50 analytical, toxicological, environmental, and pharmacological studies were conducted on DBDPE to evaluate its safety and to register as appropriate in other jurisdictions. These studies were provided to ECCC through the assessment process to assist in the evaluation of this substance. The state of the science as demonstrated by these studies does not support a conclusion that would justify the proposed risk management measures.

[1] ECCC, Decabromodiphenyl Ethane (DBDPE) – Information Sheet, https://www.canada.ca/en/health-canada/services/chemical-substances/fact-sheets/chemicals-glance/decabromodiphenyl-ethane.html#a5.1.

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In addition to the studies discussed above, there is new scientific information since publication of the Final Screening Assessment in May 2019 that was not available and therefore not evaluated by ECCC or HC during the Screening Assessment. This additional scientific information provides a sufficient justification for the Minister to reconsider the conclusion reached in the Final Screening Assessment that DBDPE is "toxic" under CEPA.

First, in November 2020, an independent third-party review was provided to ECCC of the available scientific reports, as well as the draft and final screening assessments, for the purpose of providing an opinion on the validity of the approach taken and conclusions reached by ECCC with respect to DBDPE. Below are several of the conclusions from the independent review:

- DecaBDE is not a good read-across substance for the purpose of estimating the rate of potential debromination of DBDPE;
- Guidelines and recommendations for applying a read-across approach exist but were not adequately followed by ECCC in the Final Screening Assessment; and,
- The Final Screening Assessment does not include evidence to substantiate that lower-form DBDPE products enter the environment in a quantity or concentration that have or may have an immediate or long-term harmful effect.

Second, the National Academy of Sciences, Engineering, and Medicine ("NAS") published a study report[2] in May 2019 to determine if organohalogen flame retardants ("OFRs") – which includes DBDPE – could be divided into subgroups based on similar chemical structures or physicochemical properties for the purposes of further assessment. NAS recommended dividing 161 OFRs into 14 subclasses. It is noteworthy that in the study, NAS grouped DBDPE and decaBDE into separate subclasses. This finding further supports the position that it is not appropriate to use decaBDE as a surrogate for DBDPE to draw any conclusion regarding potential breakdown products in the absence of supporting studies.

Third, the results of a 2,000-hour study modelling the photodegradation of DBDPE within high impact polystyrene (HIPS) and polypropylene (PP) in the Canadian environment has been shared with ECCC. Conclusions from that study are that DBDPE has a long half-life under realistic photodegradation conditions,

[2] National Academies of Sciences, Engineering, and Medicine. 2019. A Class Approach to Hazard Assessment of Organohalogen Flame Retardants. Washington, DC: The National Academies Press. doi: https://doi.org/10.17226/25412.

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any formation of lower brominated products from DBDPE is negligible and are not the species of concern expressed by ECCC, and lower form brominated products can be prevented with the help of ultraviolet absorption and light stabilizers.

The 50 studies previously shared with ECCC, along with new information that has been shared with ECCC since publication of the Final Screening Assessment, does not support either the finding that DBDPE is "toxic" under CEPA or the proposed risk management measures.

Based upon the facts and arguments set out above we ask the Minister to appoint a Board of Review to "inquire into the nature and extent of danger" posed by DBDPE.

If you should have any questions regarding this information, please feel free to contact me by one of the following methods:

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Sincerely,

Lee Perry

Lee Perry
Engineering Manager