



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

MEMORANDUM

SUBJECT: Request for Enforcement Statement Regarding the Prohibition of Processing and Distribution in Commerce of Decabromodiphenyl Ether (DecaBDE) Containing Wire and Cable Insulation in Nuclear Power Generation Facilities under 40 CFR 751.405(a)(2)(ii)

FROM: Michal Freedhoff
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TO: Larry Starfield
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Office of Enforcement and Compliance Assurance

The purpose of this memorandum is to request that the Office of Enforcement and Compliance Assurance (OECA) issue an enforcement statement regarding certain entities that are subject to prohibitions on processing and distribution in commerce of decaBDE-containing wire and cable insulation for use in nuclear power generation facilities under Section 751.405(a)(2)(ii) of EPA’s final rule, “Decabromodiphenyl Ether (DecaBDE); Regulation of Persistent, Bioaccumulative, and Toxic Chemicals Under TSCA Section 6(h),” (or the “decaBDE rule”). This rule was one of five issued in January 2021 on persistent, bioaccumulative, and toxic (or PBT) chemicals under the Toxic Substances Control Act (TSCA) Section 6(h).

The decaBDE rule prohibited the manufacture of decaBDE in 2021 but included an extended compliance deadline of January 6, 2023, for processing and distribution in commerce of decaBDE for use in wire and cable insulation in nuclear power generation facilities, and for decaBDE-containing wire and cable insulation. EPA established the January 6, 2023 compliance deadline in the January 2021 final rule after the only known U.S. supplier of decaBDE-containing wire and cable for this industry indicated, in comments on the proposed rule, the need for an additional period of time consistent with the January 6, 2023 deadline EPA ultimately finalized for this use.¹ EPA heard nothing from this supplier with regard to issues associated with meeting the January 6, 2023 deadline until the fall of 2022. Moreover, this supplier apparently also failed to consult with many or all of its customers of decaBDE-containing wire both when it originally provided its estimate of the additional time that would be required to EPA, and in the almost two years following the finalization of the rule. However, without these necessary wires, cables and components, nuclear power generation facilities report that they could experience power outages and/or grid instability or the inability to maintain safe operations.

¹ Any knowing use of decaBDE-containing wire and cable, and the critical components using the decaBDE-containing wire and cable, processed and distributed after the compliance deadline is a violation of TSCA Section 15(2).

Use of DecaBDE in Wire and Cable for Nuclear Facilities

DecaBDE is used in Class 1E cables which are qualified to meet industry standards and the Nuclear Regulatory Commission's (NRC) requirements in 10 CFR 50.49, "Environmental qualification of electric equipment important to safety for nuclear power plants," including the Institute of Electrical and Electronics Engineers 383 ("IEEE 383") standard for instrumentation and power cable insulation. Both the NRC and the Department of Energy (DOE) have provided information to EPA regarding the potential impacts that could result from the inability to acquire qualified wire, cable, and components. For example, DOE estimates that flame-retardant material is required in approximately 450 miles of wires and cables and in over 2,000 components and subcomponents in each of over 90 commercial nuclear power reactors. The NRC provided data on the near-term impact of EPA's decaBDE rule on nuclear power reactors and stated that operating nuclear power plants that are unable to timely replace components due to the decaBDE restrictions may be required to shut down based on their inability to meet NRC requirements for operation.

OCSPP understands that an alternative wire and cable insulation which does not contain decaBDE has been developed by the primary U.S. supplier and has undergone qualification testing to ensure it meets the industry and regulatory standards. However, once the wire and cable with the alternative insulation is qualified, OCSPP understands that each component part that contains the alternative wire and cable will also need to undergo its own qualification testing process. The NRC has informed EPA that the environmental qualification process can take licensees and vendors 2 to 3 years to qualify a component and an additional six months to a year may be required for licensees and vendors to establish adequate inventory prior to being able to ship a component to a nuclear power plant. Until this decaBDE-free alternative is ready to be placed into service, regulatory and industry stakeholders have stated that the lack of availability of cables and wiring which contain decaBDE would negatively affect both scheduled maintenance outages and the ability to address unplanned equipment failure and, ultimately, force multiple nuclear power plants to be temporarily taken offline because they cannot be safely operated until acceptable replacement parts are available.

OCSPP is aware of the critical role the nuclear power industry plays in the U.S. power system, which provides approximately 20% of the domestic power supply. Nuclear power industry representatives from both domestic and international nuclear facilities, companies that supply the industry, and trade groups, as well as other governmental agencies have made it clear that there could be significant adverse effects if a compliance date extension and/or some form of enforcement discretion is not granted. This includes potential shutdowns of multiple nuclear power facilities and the potential disruption of the national and global energy grid and the supply of electricity to customers, due in part to an apparent years-long lack of engagement and communication between the primary supplier and their customers, as well as with the Agency. Therefore, OCSPP is requesting an enforcement statement be made to avoid these shutdowns and to address safety concerns and impacts to the U.S. power supply, as well as to facilities outside of the United States.

Stakeholder Input on This Use

As early as 2018, the Agency met with the only known supplier of decaBDE-containing wire and cable, who explained that they were evaluating alternatives and working towards an expected phase out of all decaBDE uses in wire and cable for nuclear power generation facilities in the next 1-3 years or by 2021. Based on the Agency's belief that an alternative would be available by 2021, the July 2019 proposed rule did not include an extended compliance date for this use. After the public comment period on the proposed rule closed and EPA initiated additional stakeholder engagement in early 2020, the company verbally explained they were still two years away from replacing decaBDE with an alternative chemical, and in January 2020, submitted a late public comment explaining the qualification efforts that were still underway. One year later, in January 2021 EPA finalized its decaBDE rule and granted the company's request for the longer phase-out period for this use, extending the deadline to January 6, 2023. The public

docket for this rulemaking provides more background on EPA's engagement with stakeholders: <https://www.regulations.gov/docket/EPA-HQ-OPPT-2019-0080>.

Despite earlier opportunities after the proposal was published in 2019 and opportunities in 2021 to raise concerns with EPA, this supplier failed to notify EPA of the inability to meet the January 6, 2023 deadline to discontinue use of decaBDE for this use and the potential impacts to the nuclear power sector that would result from this inability until late 2022. It was clearly not EPA's intent during the development of the rule to have a disruptive impact on critical infrastructure such as the power supply. It is fair to say that EPA's objective was to ensure adequate time to ensure the availability of an approved alternative. However, the lack of full engagement by the spectrum of industry stakeholders in the rulemaking process and an apparent failure by the entity that provided the Agency with the information used to set the January 6, 2023 compliance deadline to communicate with its customers to ensure the timeline was feasible, has led to the current circumstance wherein the compliance deadline EPA established in the final rule for certain processing and distribution in commerce activities associated with the use of decaBDE containing wire and cable is not feasible.

Since the January 6, 2023 compliance deadline in the final rule, EPA has received multiple requests and letters of concern regarding the availability of decaBDE-containing wire and cable for use in the nuclear power sector, including from international customers. This flood of inquiries and outreach came shortly after the supplier of a specific Class 1E wire and cable, which contains decaBDE, discontinued processing and distribution and notified their customers of their inability to continue supplying their wire and cable due to the January 6, 2023 compliance date of 40 CFR 751.405(a)(2)(ii).

Despite multiple opportunities to provide input on EPA's decaBDE rulemaking ahead of the January 6, 2023 compliance deadline, no entity, including the entities EPA recently heard from and the supplier of this wire and cable, informed EPA of any concerns about their inability to meet the January 6, 2023 compliance deadline for this use, or the impacts of not meeting that deadline, until late 2022. This is despite EPA providing multiple opportunities to provide input on EPA's obligations to address PBTs under TSCA 6(h). For example, prior to the publication of the proposed PBT rule (84 FR 36728), EPA hosted a public webinar and held multiple stakeholder meetings. EPA continued to engage with stakeholders after the proposal was published, held consultations, and published press releases announcing EPA's rulemaking, additional opportunities to comment, and that EPA was revisiting the 2021 PBT rules. Additionally, on March 16, 2021, EPA announced its intent to review the five PBT rules (EPA-HQ-OPPT-2021-0202-0001) and broadly requested public comment. This notice specifically asked for comment on implementation issues associated with the final rules, including the rule containing the January 6, 2023 deadline for decaBDE in the nuclear power industry. No entity submitted any specific comments regarding concerns with the January 6, 2023 compliance deadline for processing and distribution in commerce of decaBDE for use in wire and cable insulation in nuclear power generation facilities, and for decaBDE-containing wire and cable insulation. Nonetheless, following this comment period, OCSPP requested a call with the supplier of these decaBDE-containing wire and cables, which was held in April 2021. Again, at that point, this company did not raise a concern to EPA about meeting the 2023 deadline. The mention of potential shutdowns within the nuclear power industry was not raised by this company until a December 2022 meeting, despite written communications that took place between EPA and the company in October and November of 2022; rather, in those earlier communications, the supplier focused its requests to the Agency largely on its stated interest in exhausting its supply of decaBDE.

EPA's Current Rulemaking and Request for an Enforcement Statement

As previously mentioned, EPA is aware that an alternative wire and cable insulation technology which does not contain decaBDE is being developed and requires qualification testing to ensure it meets the industry and regulatory standards. OCSPP understands that this may take several years given the number of companies that will need to obtain approval for components containing the alternative wire and cable

insulation technology. OCSPP is requesting that OECA issue a statement regarding OECA's enforcement priorities and intent only for the time period until EPA issues a final rule addressing the compliance deadline for this use. Based on information received to date, OCSPP expects to propose to extend the compliance deadline under 40 CFR 751.405(a)(2)(ii) (use in wire and cable insulation at nuclear power generation facilities) and address potential export notification for this use in a proposed rule scheduled to be published in November 2023. The final rule is scheduled to be issued in September 2024. This rulemaking was initiated as a result of OCSPP's review of PBT rules under Executive Order 13990 (Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis) and other administration priorities. The timing of the availability of a decaBDE-free substitute to the nuclear power generation sector will be a key consideration in this rulemaking.

While OCSPP recognizes that the continued processing and distribution of decaBDE-containing articles leaves a PBT chemical in commerce longer than was deemed "as soon as practicable" in the January 2021 final rule, an enforcement statement would be in the public interest based on the information stakeholders belatedly provided to EPA. More specifically, as detailed above, an enforcement statement with the intent to help ensure that wires, cables, and components necessary to the safe operation of nuclear power plants will continue to be available. Without these necessary wires, cables, and components, nuclear power plants may not be able to resume operation following scheduled and unscheduled maintenance, which could lead to power outages and/or grid instability or the inability to maintain safe operations. OCSPP will further review and verify this information as it reconsiders the PBT rules.

Importantly, this request solely addresses the need for an enforcement statement regarding (i) violations on the prohibition on processing and distribution of decaBDE-containing wire, cable, and components for use by nuclear power generation facilities, including DOE and Department of Defense facilities like nuclear-powered aircraft carriers and submarines, (ii) the related recordkeeping requirements of 40 CFR 751.405(c), solely as to the requirement that records required to be kept under 40 CFR § 751.405(c)(1)(ii) must demonstrate compliance with the rule, and (iii) any related TSCA Section 15(2) violation (e.g., use for commercial purposes a chemical substance or mixture which a person knew or had reason to know was manufactured, processed or distributed in commerce in violation of TSCA Section 6).

OCSPP does **not** seek an enforcement statement regarding violations of the prohibition on the processing and distribution of raw and/or compounded decaBDE for use in wire and cable insulation or for decaBDE-containing wire and cable not for use in nuclear power generation facilities. EPA's "Exposure and Use Assessment of Five Persistent, Bioaccumulative, and Toxic Chemicals" notes that releases of decaBDE could occur during the processing of decaBDE to make the wire and cable.² However, once formulated, decaBDE is encased in the cured coating and the potential for worker exposure is minimal, and an enforcement statement would not jeopardize the Agency's efforts to ensure the protection of health and the environment under TSCA. OCSPP is requesting an enforcement statement to avoid widespread disruption of power grid and nuclear plant safety, both to domestic and facilities using these wire and cables in other countries, while OCSPP develops a final agency action to address the compliance date for processing and distributing decaBDE-containing cable and wire insulation.

Because DecaBDE is listed on Annex A of the Stockholm Convention on Persistent Organic Pollutants (the POPs Convention), OCSPP requests that if any company intends to export decaBDE-containing wire, cable, and components, the company should provide notification to EPA and to their international customer(s). As to EPA notification, companies should be instructed to report such exports to EPA as if under TSCA Section 12(b) and the provisions of subpart D of 40 CFR part 707, using the TSCA Section

² "Releases could occur from transfer operations, volatilization from extrusions, disposal of transfer containers, waste from equipment and area cleaning, and disposal of off-spec product" [...] "Inhalation exposure from fugitive dust that is generated from unloading and transfer of the flame retardant into mixing vessels and from vapors generated during extrusion might occur. Dermal exposure is most likely to occur during formulation when the bags of flame retardant are emptied into a hopper prior to mixing." (Page 20)

12(b) reporting tool available in the Agency's Central Data Exchange (CDX). Once EPA is notified, EPA will then notify the country of destination. Exporting companies should be aware that notification to EPA of such intent to export does not itself provide consent by the importing country for import of the shipment; the importing country may choose not to permit import of such shipment. In addition to the notification to EPA, the exporting company should also notify the importing international company that the shipment contains a restricted chemical, decaBDE, and of decaBDE's listing on the POPs Convention.

Please feel free to contact me for further information, or your staff may contact Mark Hartman at (202) 564-0985. OCSPP has worked closely with OECA on determining the extent to which an enforcement statement might appropriately be provided, and their assistance has been extremely helpful. Thank you for your consideration of this request.

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