

Response ID ANON-75K5-1Z66-3

Submitted to Consultation on potential amendments to the Persistent Organic Pollutants (POPs) Regulation
Submitted on 2023-04-27 11:47:36

About you

1 Would you like your response to be confidential? (Required)

No

Reason for confidentiality:

2 What is your name?

What is your name?:
(Redacted) (Redacted)

3 What is your email address? If you enter your email address, then you will automatically receive an acknowledgement email when you submit your response.

Email address: (Redacted)
@ .com
(Redacted)

4 Are you responding as an individual or on behalf of an organisation?

Organisation

5 What type of organisation are you responding on behalf of?

Industry association

Other:

6 If you are responding on behalf of an organisation, what is the name of the organisation?

organisation name:
European Electronics Recyclers Association

7 Where in the UK are you/your organisation based and/or in operation? (tick all that apply)

England, Wales, Scotland, Northern Ireland, Outside the UK (EU)

Waste limits (iv) - Polybrominated diphenyl ethers (PBDE)

35 Is this proposal of particular importance to you and/or the organisation you represent?

Yes (please specify how below)

why important PBDE WL (iv):

The European Electronics Recyclers Association (EERA) is an association representing e-waste re-use and recycling and end-processor operators situated on the continent of Europe, including members in the UK.

The proposal to lower the PBDE limits is of particular importance to our e-waste recyclers and specialist WEEE plastic reprocessing members who recycle and recover plastics derived from operations at WEEE treatment facilities.

36 To what extent do you agree or disagree with our proposed waste limit for PBDE (350 mg/kg, dropping to 200 mg/kg 5 years after entry into force)?

Strongly Disagree

37 Please explain the reasons for your answer to question 36, with reference to evidence and/or possible alternative options where relevant

Please explain the reasons for your answer to question 36, with reference to evidence and/or possible alternative options where relevant:

EERA strongly recommends that Option 2 is selected and not the preferred lead option.

Our reasoning is that a lowering of the limit value from 1,000 mg/kg to 500 mg/kg represents a 50% reduction, which is already a substantial undertaking for the plastics recycling industry to achieve on a continuous industrial scale but is possible for professional and compliant operators under today's

conditions, and with the technology available.

Considering how plastic waste from WEEE is tainted with PBDEs and needs specialist treatment processes, EERA believes that mechanical recycling is the best route to ensure that plastics containing PBDEs are identified, segregated, and destroyed. Consequently, the limits set in the UK POPs Regulation must facilitate mechanical recycling as the solution for the environmentally sound management of all WEEE derived plastics.

Plastics reprocessors, like all waste management operators, must consider first the precautionary principle for their operations. If there is uncertainty about a processed batch meeting any limit in place or proposed then they are not able to consider the material as recoverable but must consign it as waste for incineration / energy recovery. In addition, the lack of accurate scientific and validated screening methods suitable for industrial volume-based continuous operations does not allow reprocessors to have the certainty and assurance they require for their clients or for providing evidence of compliance to environmental agencies.

Validated test methods must be suitable for the Option 2 values to provide parity for all operators, especially considering the daily volumes and variances of WEEE plastic arising. If the lower limit of 350 mg/kg is implemented, with the following 200 mg/kg imposed in later years without further research and risk assessments, EERA considers that there will be an immediate and vast increase in the volumes of waste plastics requiring incineration and a loss to the circular economy of useful and sought after secondary plastic materials. This will also impact aspirations by the Government and manufacturers of increasing recycled content in EEE and is contrary to the priorities in the waste hierarchy .

Whilst the Government has undertaken research with the Environment Agency showing that eight UK plastics reprocessors collaborating in a study achieved the 350 mg/kg result, there are a number of flaws in the process implemented. The limited samples taken for this study, and the methodology of taking the samples are not consistent with the day-to-day operations of reprocessors (three samples only from each participating operator but in some cases there was only one sample from each stream and taken from one output batch). Results from samples taken from one of the eight operators was rejected for operational reasons, meaning the assumption that the 350 mg/kg is achievable was based on 21 samples only. It is also a fact that the selective and processed batches where samples were taken is certainly inconsistent with the daily (some say hourly) input differences in the plastic materials arriving from WEEE recyclers.

For example, if a reprocessor receives an incoming consignment on one day / load consisting of mostly CRT cases, or of ICT and mixed household appliances, then the PBDE content will certainly be higher than when a consignment of plastics derived from fridge or large appliance recycling arrives. It is a reality also that some reprocessors mix their input materials for operational and/or volume reasons, or this is also often done at the upstream stage by WEEE recyclers to reduce carbon footprint / transport costs (especially plastics from FPD and CRT streams), or the input materials are contaminated with other materials (e.g. wood, dust etc.). Thus the results from a sink/float process will change each time a new output batch is generated. To evidence achievement of being below the lower limit values would mean that sampling would therefore be necessary for each batch and potentially each hour's processing.

This is both expensive in terms of purchasing and calibrating sampling equipment, and time-consuming for compliant operators to implement and monitor and store prior to a batch passing the test being sold as secondary raw materials, and to ensure effective records are kept for review and evidence.

This is likely to just create a loophole for those with less stringent monitoring systems or those looking to avoid incineration costs, leading to an increased administration burden for the environmental agencies required to monitor operators and ensure compliance. It must also be recognised that without an agreed and validated sampling system across the UK for all plastic reprocessors, enforcement action is considered unfeasible at Court level – again providing a loophole for bad actors.

The researchers carrying out the study for the Environment Agency included a number of assumptions in the study (e.g. they state the sampling was representative of a day-to-day input and processing operation) that is inconsistent with the responses our members have told us when considering the actual reality of a high-volume day-to-day operation. The sample sizes taken were also inconsistent, varying between 20kg and 200kg. These weights are considered to be unreasonable and unrepresentative, and not consistent with the industrial scale volumes being processed daily at these sites.

In a study on representative sampling to determine POP limit values in waste plastics made by INERIS (European Commission (Directorate general for Environment), Bio Innovation, INERIS, RPA 2021. Study to support the assessment of impacts associated with the review of limit values in waste for POPs listed in Annexes IV and V of Regulation (EU) 2019/1021), which was part of the impact assessment on the EU POP Annex IV limit values, it was calculated that to be representative for a limit value of 200 mg/kg, a sample of 1000 kg should be taken. Aside from the cost of installing automatic sampling (at hundreds of thousands of pounds), reprocessors are not likely to have the space, time, available personnel and skills to test at these volumes, and laboratories are certainly not capable of handling these quantities.

The higher the potential costs to operators versus a lower recoverable output and therefore income stream, is likely to see closures of reprocessors due to the lack of financial certainty.

EERA strongly believe that the focus should not be on analysis but on representative sampling (including sample reduction and preparation). Following a risk based assessment on future impacts, this must be put into place prior to the lower limit of 350 mg/kg being imposed in five years (Option 2) to allow industry and Government to work together to provide effective and representative solutions that can be applied equally to all plastic reprocessors, making an enforceable method available for all stakeholders.

38 Based on current EA evidence, decreasing the PBDE waste limit to 200mg/kg in GB is expected to have no/minimal additional impacts on WEEE/ELV plastic recycling, compared to existing waste limits. Are you aware of any evidence to either support or oppose this? Please provide details if so.

Based on current EA evidence, decreasing the PBDE waste limit to 200mg/kg in GB is expected to have no/minimal additional impacts on WEEE/ELV plastic recycling, compared to existing waste limits. Are you aware of any evidence to either support or oppose this? Please provide details if so. :

EERA STRONGLY DISAGREES that there will be no/minimal additional impacts of reducing the limit values to 200 mg/ kg.

The SOFIES/BSEF report 'Study on the impacts of brominated flame retardants on the recycling of WEEE plastics Europe' (Nov 2020) concluded that at the time of writing, there was approximately 2.6 million tonnes generated of plastics derived from WEEE per year in Europe.

Of that figure, plastics containing BFRs was stated as being 9% of the total, with the restricted BFRs (e.g. Octa-BDE and Deca-BDE) representing a smaller and rapidly declining fraction of all BFRs found in WEEE plastic. The sink/float mechanisms in use today (using density separation technology) at the current limit values results in a heavy fraction (containing plastics with BFRs and other additives not suitable for recovery) of around 45-55% by mass. This "POPs" material is separated and sent for incineration / energy recovery.

25-35% of EEE by weight can be attributed to plastic, which is increasing exponentially year on year due to the greater use of plastic and a reduction in the use of metals in new products – especially in the screens and small / mixed appliance streams. If the limit value is lowered to 500 mg/kg it is possible to achieve a recovery percentage output of around 45-55% of that plastic volume. As there is no evidence in the UK from national batch testing records to determine true (versus substantiated) recycling achievements, EERA considers this means that the recycling targets set down in the WEEE Regulations for the different WEEE categories is going to be harder to meet but potentially possible today if effective separation technology is in use.

Should the limit values be set at the lower values in the lead option (e.g. 350 mg/kg and leading to 200 mg/kg) then analysis by DEFRA of the percentages of plastics in each EEE category (2009) show that if 60%+ of the plastic arising from WEEE is rejected then the recycling targets cannot be met for the majority of the 14 WEEE categories within the UK WEEE Regulation. This will without doubt cause wide-spread impacts for EEE producers, EEE producer schemes and WEEE recyclers as much more plastics will be above these limits (when considering the lack of validated test methods on a continuing industrial scale process and volumes arising) so require incineration and thus the recycling targets set down in the WEEE Regulations will not be met.

There is a lack of compliant high-temperature incineration capacity in the UK. In addition, those incinerators suitable for receiving plastics are today declining to give quotes to UK reproprocessors or e-waste recyclers as they have no interest in receiving this problematic (to them) waste.

The lowering of the limit value will, as stated, will see an exponential and fast increase in the volumes of plastics being diverted for disposal routes – and thus the lack of incineration capacity will cause a great impact for recyclers and reproprocessors in respect to compliance, storage and site permit conditions.

In addition to the impact on the circular economy, there will be an impact on the UK's carbon emission objectives. A study by WRAP published in 2009 (Separation of mixed WEEE plastics final report) found there was a 50-75% reduction in emissions from using recycled WEEE plastics rather than virgin plastics). This should not be ignored.

EERA advocates that Option 2 be implemented, with further research and risk assessments carried out in the succeeding period to ensure that any lowering the limit further from 500 mg/kg is effective, measurable and that considers any impacts valid at that time. It is imperative to ensure that validated test methods can be put into place first.

A final key positive impact if Option 2 is put into place is that it would mean that the UK will be aligned with the current legislation in force in the European Union, which would facilitate the extensive cross-border movement of processed and compliant plastics within the reprocessing and manufacturing industries between the EU and UK.

In summary – EERA considers that there will be the following impacts:

- Enforcement actions will be unenforceable without validated and scientific test methods that show that the lower limits are achievable on a continuous and industrial scale.
- WEEE recycling targets are unlikely to be met. There is no evidence available today to consider what the ratio of plastics to other materials will be found in EEE in the distant future, thus the impact of the recycling targets cannot yet be evaluated.
- Innovations being explored today will be hindered and thus the new processes the industry is developing to further recover additional polymers is unlikely to reach fruition due to concerns about marketability and economic balance if the thresholds are lowered.
- The lead option is contrary to the waste hierarchy if the large volumes of recoverable plastics have to be diverted for incineration simply because the precautionary principle will have to be the primary consideration for reproprocessors. This is also against the principles of the circular economy.
- There is a lack of incineration capacity in the UK, which will without doubt cause storage and compliance issues for operators, and this is also a likely driver for illegal actors to increase their activities using undocumented routes. These overseas destinations are not likely to meet the equivalent standards set for UK operators, and yet the plastics recovered will be used in manufacturing new products to be imported back into the UK.
- If Option 2 is adopted, then the valuable trade relationship between the UK and EU will be aligned and supported.

39 Are you aware of any evidence to indicate the presence of PBDE in CDW plastics and textiles, and/or other waste streams or sectors? Please provide details if so, including with reference to relevant waste streams, tonnages, concentration levels and impacts where possible.

Are you aware of any evidence to indicate the presence of PBDE in CDW plastics and textiles, and/or other waste streams or sectors? Please provide details if so, including with reference to relevant waste streams, tonnages, concentration levels and impacts where possible.:

NA

40 Are there any additional costs you anticipate for disposing of PBDEs contaminated waste under the proposed waste limit (such as incineration gate fees, administrative costs or time taken to familiarise with the requirements and sourcing disposal, testing, segregation, storage of wastes etc)? If so, please can you provide any supporting evidence.

Are there any additional costs you anticipate for disposing of PBDEs contaminated waste under the proposed waste limit (such as incineration gate fees, administrative costs or time taken to familiarise with the requirements and sourcing disposal, testing, segregation, storage of wastes etc)? If so, please

can you provide any supporting evidence. :

The alternative to recovering separated polymers suitable for re-use as secondary raw materials from the WEEE arising in the UK are bleak.

Given the lack of incineration capacity in the UK, incinerator operators will see the new volume of plastic arising as a result of lower limits as a golden opportunity to increase costs. These costs will in turn have to be passed from plastic reproducers to WEEE recyclers, and from them to the PROs and producers. Ultimately consumers will have to bear the increased costs when purchasing new EEE.

Under the UK permitting regulations, prospective new incinerators are unlikely to be in place and operational in time and in line with the proposed timelines. This is given the requirements for planning permissions, environmental impact assessments and permit approvals - now estimated at 3-5+ years.

Given the lack of validated and scientific test methods, those compliant operators with good testing and monitoring systems in place will be forced to compete in the market with less stringent actors who will have lower administration and operational costs. This may make them unviable, leading to a lack of processing capacity in the UK. Test methods must be universal and harmonised and enforceable across the UK.

41 Are you aware of any other organisations that may be impacted by this proposal? Please provide details if so, including references to the number of organisations, types of organisations (Local Authorities, businesses, independent or public bodies), size (micro, small, medium or large), and the anticipated impacts, if known.

Are you aware of any other organisations that may be impacted by this proposal? Please provide details if so, including references to the number of organisations, types of organisations (Local Authorities, businesses, independent or public bodies), size (micro, small, medium or large), and the anticipated impacts, if known.:

No

Consultee Feedback on the Online Survey

111 Overall, how satisfied are you with our online consultation tool?

Very satisfied

112 Please give us any comments you have on the tool, including suggestions on how we could improve it.

Please give us any comments you have on the tool, including suggestions on how we could improve it. :

It would have been helpful to have a PDF version of the questions available to start to prepare responses.