

Regulatory position statement

The treatment of liquid crystal display units containing mercury to comply with BATRRT

Background

The [Waste Electronic and Electrical Equipment \(WEEE\) Directive](#) requires that certain components and other parts of WEEE are removed before it can undergo any further form of treatment. This requirement is included in permits or exemptions relating to the treatment of WEEE.

Liquid crystal displays (LCDs) are one of the types of component that may need to be removed (together with their casing if appropriate) if:

- they have a surface area greater than 100 cm² (larger than 4 inches by 4 inches); or
- they are back-lit with a gas discharge lamp.

The Directive also requires subsequent removal of any discharge lamps, and the removal of any mercury from them.

Sites storing and treating WEEE must do so under a relevant environmental permit or exemption. Treatment of WEEE must use the **Best Available Treatment Recovery and Recycling Techniques (BATRRT)** as detailed in [Defra guidance on BATRRT](#) published in 2006. This requires:

- The removal of certain LCDs, and the separation of the gas discharge backlights.
- Removed gas discharge back-lights and LCDs should be stored separately in appropriate labelled containers.

Removed gas discharge lamps are shredded and separated into glass, metal and powder. The separation process should be designed to prevent fugitive emissions of mercury vapour or dust. Recovery of the powder (which contains the bulk of the mercury) and its storage in appropriate labelled containers will be regarded as evidence that the mercury has been removed for the purposes of the WEEE Directive.

LCD televisions, laptops and monitors typically use cold cathode fluorescent lamps (CCFLs) which are a type of gas discharge lamp to illuminate the screen. There has been some debate over whether the mercury from CCFLs can be adequately captured by mechanical means, and therefore whether mechanical treatment meets the requirements of BATRRT.

On the basis of a recent [WRAP research report](#), we have concluded that it is likely that only manual treatment of LCDs (i.e. the manual extraction of the CCFLs whole and intact) will result in a realistic chance of capturing the mercury from individual lamps.

Based on the information we currently have, we do not regard mechanical treatment of whole WEEE items which contain an LCD with a CCFL or extracted LCDs which still contain the CCFL to be meeting the requirement of BATRRT.

Our approach

There will be a presumption that manual dismantling, which enables LCDs backlights containing mercury to be removed and separated whole and intact, is the only way of achieving compliance with the treatment standards established by the WEEE Directive, **unless** treatment operators are able to demonstrate that alternative (e.g. mechanical) techniques are able to remove the LCDs and contain the mercury in a manner that achieves a similar degree of protection in relation to human health and the environment.

From the date of this regulatory position statement, operators who mechanically treat LCDs and the CCFLs contained within them will have 9 months to demonstrate that the mercury is being captured or vary their treatment processes such that the CCFLs are being removed to allow separate treatment of them and capture of the mercury.

Operators who continue to mechanically treat LCDs back lit with a gas discharge lamp after the end of the 9 month period and who cannot demonstrate that the mercury is being managed in a manner consistent with BATRRT may face action in accordance with our [Enforcement and Sanctions Statement](#).

During the nine month period any continued treatment must be carried out without endangering human health, without harming the environment and, in particular:

- (i) without risk to water, air, soil, plants or animals;
- (ii) without causing a nuisance through noise or odours; and
- (iii) without adversely affecting the countryside or places of special interest.

We will be working with industry during this period to help ensure that updated working practices to treat this waste stream comply with the requirements of BATRRT.

Enforcement

We will not normally take enforcement action unless the activity has caused, or is likely to cause, pollution or harm to health. For a more detailed explanation of this enforcement position, please see our [Enforcement and Sanctions](#) statement. This can be found on the '[How we regulate you](#)' page in the Business & Industry section of our web site.

This regulatory position will cease to have effect on 1st June 2012.

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