# Persistent Organic Pollutants and WEEE

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# Purpose of this presentation

On the basis of the information provided to us by ICER

- We are able to provide regulatory advice
- On some current and future legal requirements
- To help you manage the waste in an appropriate manner
- To protect the environment and human health, and
- To help you comply with the law.

This presentation sets out our advice.

It is your responsibility to ensure you comply with the law.



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# Regulatory Regimes

This presentation will briefly cover the following regimes

- Persistent Organic Pollutants (POP's)
- Hazardous Waste
- Duty of Care
- International Waste Shipments (IWS)

Colleagues are present to answers questions on these and on Producer Responsibility.



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# Persistent Organic Pollutants (POP's)

POPs are chemicals of international concern due to their

- persistence,
- long distance transport,
- bioaccumulation, and
- adverse effects in the environment and to human health.

The Stockholm Convention is the international agreement that covers

- Elimination of their use in products, and
- management of wastes contaminated with them



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# Persistent Organic Pollutants (POP's)

Controls on waste containing POP's include:

- A prohibition on recycling, recovery, reuse and reclamation
- The need for the waste management activity to destroy (or irreversibly transform) the POP.
- Controls on mixing and contaminating other waste
- Concentration limits that define 'POP's waste'
- For PBDE's this is 1000mg/kg (in EU legislation)

# Hazardous Waste

Hazardous waste is subject to more controls

These include:

- Consignment of the waste
- Keeping records
- Submitting consignee returns for waste received
- ‘Rejection’ and reporting of misclassified waste
- Prohibition on mixing



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# Hazardous Waste

Hazardous Waste is identified by Waste Classification, which consider:

- Process that produced the waste
- Nature of the waste
- Hazardous Properties (presence of hazardous chemicals)

However if a process

- mixes hazardous and non-hazardous wastes
- without treating the hazard (e.g. it dilutes)
- The output is typically hazardous waste

# Duty of Care

You **must** take all reasonable steps to:

1. prevent unauthorised or harmful deposit, treatment or disposal of waste (see section 4.1)
2. prevent a breach (failure) by any other person to meet the requirement to have an environmental permit, or a breach of a permit condition (see section 4.2)
3. prevent the escape of waste from your control (see section 4.3)
4. ensure that any person you transfer the waste to has the correct authorisation (see section 4.4)
5. provide an accurate description of the waste when it is transferred to another person (see sections 4.5 and 4.6)

Failure to comply with the duty of care requirements is a criminal offence and could lead to prosecution.

(from – Waste Duty of Care Code of Practice, Defra, March 2016)



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# Duty of Care

**Provide an accurate description of the waste**

When describing the waste, amongst other things, you need to identify

- Any hazardous properties or chemical hazards, and
- If the waste needs particular treatment or handling

This requirement is particularly relevant to waste containing

- Hazardous substances, or
- POP's.



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# International Waste Shipments

Background

- controls the waste movements between countries.
- precise controls depend on the countries involved, and
- whether they are members of the EU, EFTA, or OECD

Exports From the UK

- Hazardous Wastes must be notified
- Exports for disposal generally not allowed
- Exports of hazardous waste to non-OECD countries not allowed

# Interaction of POPs & IWS

POP's and IWS interact

- IWS does not generally allow exports for disposal, and
- POP's does not generally allow recovery operations (unless they destroy the POP)

This leaves limited options for export of POP's waste, for example,

- Energy Recovery (e.g. Incineration/cement kiln),
- preceding bromine separation treatment



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# Interaction of POPs & Haz Waste

POP's and Hazardous Waste interact less for WEEE (only)

POP's waste

- A waste will be POP's waste if it contains sufficient POP
- It will not be if it does not (unless it has been mixed)
- POP's include certain PBDE's listed as POP's
- This is independent of hazardous or non-hazardous classification
- A non-hazardous waste can be POP's waste



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# Interaction of POPs & Haz Waste

POP's and Hazardous Waste interact less for WEEE

Hazardous waste

- Due to the presence of hazardous substances in the WEEE devices
- Hazardous substances includes antimony trioxide, TBBPA, and any PBDE's that are hazardous.
- This is independent of the PBDE's POP listing.



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# Summary of the ICER Study

ICER conducted a pro-active study to

- examine the chemical composition of WEEE plastics
- To prepare to implement the new POP DecaBDE
- To help the sector understand and manage their wastes appropriately.
- it also identified other hazardous chemicals and existing POP's

We can now consider what this means

# Devices (hazardous waste)

In summary

- Some items of CRT's, FPD's and SMW
- are hazardous waste
- due to the chemicals in the plastic (antimony, TBBPA, hazardous PBDE's)
- other components may also make them hazardous

They need to be consigned and described as such.

# Devices (POP's waste)

In summary

- Some CRT's contain POP PBDE's and are POPs waste (now)
- Some FPD's and SMW contain DecaBDE and will be POPs waste shortly.

These wastes need to be described and managed as such.

# Cathode Ray Tube plastics (Now)

The Waste:

- Contains POP's and is POP's waste
- Contains hazardous chemicals and is hazardous waste
- Classified as **both** 16 02 15* **and** 16 02 16
- Need to describe the chemicals present



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# Cathode Ray Tube plastics (Now)

Domestic

- movement requires consignment
- Disposal or recovery must be for an R & D operation that destroy the POP (e.g. incineration)

Export

- requires notification
- Must be for an R operation that destroys POP's (e.g. incineration with energy recovery)



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# Flat Panel Display Plastics (Now)

The Waste

- Contains hazardous chemicals, and
- hazardous waste
- Classified as **both** 16 02 15* **and** 16 02 16
- Need to describe the chemicals present

Movement

- Export requires notification
- Domestic movement requires consignment



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# Flat Panel Display Plastics (shortly)

In addition:

- it contains DecaBDE
- It will be a POP's waste shortly.
- Need to describe it's presence

Recovery and Disposal:

- Export must be for an R operation that destroys POP's (e.g. incineration with energy recovery)
- Domestically you can also Dispose of by incineration



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# Treated Small Mixed WEEE (Now)

The Waste

- Is a mixture of materials (not plastic waste)
- Contains hazardous chemicals and
- Is hazardous waste
- Classified as 19 02 04* (absolute hazardous)
- Need to describe the chemicals present

Movement

- Export requires notification
- Domestic movement requires consignment



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# Treated Small Mixed WEEE (shortly)

In addition:

- As it contains DecaBDE
- It will be a POP's waste shortly.
- Need to describe it's presence

Recovery and Disposal:

- Export must be for an R operation that destroys POP's (e.g. incineration with energy recovery)
- Domestically you can also dispose of by incineration



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# What should you do now?

You should:

- Review and update your current procedures/practices
- For incoming FPD, CRT and SMW
- For outgoing CRT and FPD plastics, and treated SMW,
- Ensure they comply with POPs, IWS and HW.
- Notify exports
- In addition, prepare for DecaBDE (July?)



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# What should you do now?

- Keep in touch with ICER for updates on further work on other streams.
- continue to communicate and work with us.
- We are interested to know, for example, how this is affecting Producer Responsibility.



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# For Further Information

Persistent Organic Pollutants

https://www.gov.uk/guidance/dispose-of-waste-containing-persistent-organic-pollutants-pops

Hazardous Waste

https://www.gov.uk/dispose-hazardous-waste

Duty of Care

https://www.gov.uk/government/publications/waste-duty-of-care-code-of-practice

International Waste Shipments

https://www.gov.uk/guidance/importing-and-exporting-waste



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# Who do we have here today?

**Defra**

Liz Lawton - Chemicals

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Bob McIntyre - Chemicals (covering Haz. Waste)
Nigel Homer - International Waste Shipments
Louisa Hatton - Producer Responsibility
Alan Owers - Treatment & Transfer

**Natural Resources Wales**

Tim Morris – all issues



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