LOW POP CONTENT

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Timo Seppälä

Consultant for the BRS secretariat

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DEFINITION OF THE LOW POP CONTENT

- *Article 6, paragraph 1 (d) (ii) of the Stockholm Convention*:

"(d) Take appropriate measures so that such wastes, including products and articles upon becoming wastes, are:

(i) Handled, collected, transported and stored in an environmentally sound manner;

(ii) Disposed of in such a way that the persistent organic pollutant content is destroyed or irreversibly transformed so that they do not exhibit the characteristics of persistent organic pollutants or otherwise disposed of in an environmentally sound manner when destruction or irreversible transformation does not represent the environmentally preferable option or the persistent organic pollutant content is low, taking into account international rules, standards, and guidelines, including those that may be developed pursuant to paragraph 2, and relevant global and regional regimes governing the management of hazardous wastes;"

LOW POP CONTENT EXPLAINED

- Concentration levels of the POP at which wastes consisting of, containing or contaminated with the POP above the low POP content should be disposed of in such a way that the POP content is destroyed or irreversibly transformed.
- The low POP content level is important as it determines the fate of POP wastes, including end-of-life products and articles, and as such complements the Basel Convention's guidance on the environmentally sound management of POP wastes.

(UNEP/CHW/OEWG.9/INF/9/Add.1, from 2014)

CONCENTRATION OF POP

LPC level

UTC level

Unintentional trace contamination

Annex A note (ii): "quantities of a chemical occurring as unintentional trace contaminants in products and articles shall not be considered to be listed in this Annex;"

Waste with low POP content

Can be otherwise disposed of in an environmentally sound manner

Waste at or above low POP content

Disposed of in such a way that the persistent organic pollutant content is destroyed or irreversibly transformed so that they do not exhibit the characteristics of persistent organic pollutants

DETERMINING LOW POP CONTENT (1)

- The following set of considerations can be used to determine the concentration levels to define the low POP content for each new POPs listed in Annex A, B, and C:
  - **Analytical potential**
  - **Environmental background contamination**
  - **Potential health impacts**
  - **Potential environmental impact**
  - **Disposal capacity**
  - **Economic considerations**

(UNEP/CHW/OEWG.9/INF/9/Add.1, from 2014)

DETERMINING LOW POP CONTENT (2)

- In addition to the factors listed above, other considerations should be kept in mind in determining low POP content such as:
  - All considerations may not be equally important to define the low POP content level;
  - The total volume of waste and the total concentration of POP captured will vary depending on the low POP content level (e.g. the lower the established low POP content level, the greater the volume of waste captured);
  - Various POP waste streams are not equal in terms of health and environmental impacts;
  - A precautionary approach should be taken to manage wastes with high impacts (either on human health or the environment) and high volume waste streams with unique characteristics;
  - The uncertainty and lack of knowledge and data may influence the establishment of the low POP content.

(UNEP/CHW/OEWG.9/INF/9/Add.1, from 2014)

PROVISIONAL DEFINITIONS OF LOW POP CONTENT AS OF COP-14 (1)

POP	Low POP content
Aldrin	50 mg/kg
Alpha-HCH, beta-HCH and lindane	50 mg/kg as a sum[1]
Chlordane	50 mg/kg
Chlordecone	50 mg/kg
DDT	50 mg/kg
Dieldrin	50 mg/kg
Endrin	50 mg/kg
HBB	50 mg/kg
HBCD	100 mg/kg or 1000 mg/kg

1) The limit value has been set for the sum of lindane and its by-products alpha- and beta-HCH, because they may be contained together in pesticides and production wastes.

PROVISIONAL DEFINITIONS OF LOW POP CONTENT AS OF COP-14 (2)

POP	Low POP content
HCB	50 mg/kg
HCBD	100 mg/kg
Heptachlor	50 mg/kg
Hexabromodiphenyl ether and heptabromodiphenyl ether and tetrabromodiphenyl ether and pentabromodiphenyl ether	50 mg/kg or 1000 mg/kg as a sum[2]
[Hexabromodiphenyl ether and heptabromodiphenyl ether and tetrabromodiphenyl ether and pentabromodiphenyl ether and decabromodiphenyl ether (BDE-209) present in commercial decabromodiphenyl ether]	[[50 mg/kg] [500 mg/kg] [1000 mg/kg] as a sum3]
Mirex	50 mg/kg

1) The limit value has been set for the sum of tetra-, penta-, hexa-, and hepta-BDE, because commercial mixtures have varying congener composition (see section I.B.1 of the POP-BDE guidelines), and for analytical efficiencies.
2) [The limit value has been set for the sum of tetra-, penta-, hexa-, hepta-, and decaBDE, because commercial mixtures have varying congener composition (see section I.B.1 of the POP-BDE guidelines), and for analytical efficiencies.]

PROVISIONAL DEFINITIONS OF LOW POP CONTENT AS OF COP-14 (3)

POP	Low POP content
PCBs	50 mg/kg
PCDDs and PCDFs[4]	1 µg TEQ/kg or 15 µg TEQ/kg
PCNs	10 mg/kg
PCP and its salts and esters	100 mg/kg
PeCB	50 mg/kg
PFOS, its salts and PFOSF	50 mg/kg
SCCPs	[100 mg/kg] [10 000 mg/kg]
Technical endosulfan and its related isomers	50 mg/kg
Toxaphene	50 g/kg

4) TEQ as referred to in Annex C, part IV, paragraph 2, to the Stockholm Convention, but only for PCDDs and PCDFs.

FURTHER WORK

- Work towards a review of the provisional low POP content values is undertaken by the small intersessional working group on POP wastes technical guidelines, based on COP decisions.
- The values are reviewed and can be changed by the COP
- BC-14/4
  - « ...updating of specific technical guidelines with regard to the chemicals listed in Annex A to the Stockholm Convention by decisions SC-9/11 [dicofol] and SC-9/12 [perfluorooctanoic acid (PFOA), its salts and PFOA-related compounds] of the Conference of the Parties to the Stockholm Convention.. .»
    - Establishment of levels of destruction and irreversible transformation for the chemicals necessary to ensure that when disposed of they do not exhibit the characteristics of persistent organic pollutants specified in paragraph 1 of Annex D to the Stockholm Convention;
    - Determination of which disposal methods constitute environmentally sound disposal as referred to in paragraph 1 (d) (ii) of Article 6 of the Stockholm Convention;
    - Establishment, as appropriate, of the concentration levels of the chemicals in order to define for them low persistent organic pollutant content as referred to in paragraph 1 (d) (ii) of Article 6 of the Stockholm Convention;

CHALLENGES

- BC-14/4:
  - *"5. Recognizes* that provisional low persistent organic pollutant content values have been established at previous meetings of the Conference of the Parties and that knowledge limitations have posed challenges to the setting of such values;"

- Analytical challenges
  - Rapid measurements of POPs are not yet possible
  - Screening technologies (e.g. XRF) do not measure the POP but an indicator of its presence (e.g. Br)
  - Validated analytical methods are not available for all POPs and all matrices (e.g. recovery rates differ between different types of plastics)
  - Validated methods for lower concentrations needed to be able to reduce Low POP Content
    - "total volume of waste and the total concentration of POP captured will vary depending on the low POP content level"

- Practical challenges
  - Identifying POPs waste in complex objects (e.g. vehicles or multi-layered fabrics, leather)
  - Separation of POPs containing parts in complex objects