Stockholm Convention Adds ‘New’ POPs

In January 2009 the Conference of the Parties (COP), the governing body of the Stockholm Convention, agreed to incorporate nine chemicals into the list of Persistent Organic Pollutants (POPs) as defined by the convention. In addition, the Persistent Organic Pollutants Review Committee (POPRC), a subsidiary body to the Stockholm Convention, adopted three chemical compounds to be considered for future inclusion as POPs.

The Stockholm Convention on Persistent Organic Pollutants was established in 2001 and entered into force in 2004. This global treaty was developed to protect human health and the environment from Persistent Organic Pollutants, aka POPs. Stockholm Convention POPs are distinguished by four main characteristics: 1) long-term persistence; 2) distribution across wide boundaries; 3) bioaccumulation through the food web; and 4) toxicity to both humans and wildlife.\(^1\)

Initially the convention listed 12 chemicals as POPs due to their ability to cause adverse effects in humans and the environment:
- **Pesticides:** Aldrin, dieldrin, endrin, chlordane, heptachlor, mirex, DDT, hexachlorobenzene (HCB) and toxaphene.
- **Industrial Chemicals:** Polychlorinated biphenyls (PCB) and HCB.
- **Unintentional By-products:** Polychlorinated dibenzo-p-dioxins (Dioxin), polychlorinated dibenzofurans (furan), HCB and PCBs.

In May of 2009, the Conference of the Parties (COP) held its fourth meeting, and agreed that the first “dirty dozen” chemicals would be joined by a new set of nine chemicals to be listed as POPs:
- **Pesticides:** Chlordecone (aka kepone), alpha-hexachlorocyclohexane (α-HCH), beta hexachlorocyclohexane (β-HCH), gamma hexachlorocyclohexane (γ-HCH or lindane) and pentachlorobenzene.
- **Industrial Chemicals:** Hexabromobiphenyl, pentachlorobenzene, perfluorooctane sulfonic acid and its salts (PFOS) and perfluorooctane sulfonfluoride, tetrabromodiphenyl ether and pentabromodiphenyl ether (tetraBDE and pentaBDE) and hexabromodiphenyl ether and heptabromodiphenyl ether (HexaBDE and HeptaBDE).
- **Unintentional By-products:**\(^2\) α-HCH, β-HCH, and pentachlorobenzene.

The Stockholm Convention categorizes POPs into three Annexes as follows:
- **Annex A (Elimination):** Parties to the convention must take steps to eliminate the production and use of the chemicals listed under Annex A.
- **Annex B (Restriction):** Parties to the Convention must take steps to restrict the production and use of the chemicals listed in Annex B.
- **Annex C (Unintentional Production):** Parties to the Convention must take steps to reduce the unintentional releases of chemicals listed in Annex C.

In addition to the nine new chemicals added as POPs at the 2009 meeting, the POPs Review Committee (POPRC) also listed three new candidates to be evaluated for inclusion as POPs in the Stockholm Convention. These are:
- **Short-chained chlorinated paraffins (SCCP)**
- **Endosulfan**
- **Hexabromocyclododecane (HBCDD)**

CIL offers the following high purity standards for analysis of these compounds:
- **Pesticides:** Pesticide Individual Standards, Pesticide Standard Mixtures
- **Industrial Chemicals:** PCB Individual Standards, PCB Standard Mixtures, Brominated Diphenyl Ether Individual Standards, Brominated Diphenyl Ether Standard Mixtures, Hexabromobiphenyl, PFOS, Hexachlorobenzene, Pentachlorobenzene
- **Unintentional By-products:** Dioxin and Furan Individual Standards, Dioxin and Furan Standard Mixtures

References
\(^1\) The Stockholm Convention on Persistent Organic Pollutants (POPs): “What Are POPs.”

\(^2\) This is a revised version of the original references provided, correcting the citation and updating the information to reflect the most recent understanding of POPs.