

### **Investigation on Potential Sources of PCB<sub>s</sub> and PCDD/PCDF<sub>s</sub> in China\***

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China began its research on the sources of exposure and environmental levels of PCB<sub>s</sub> in 1978. A total number of 8000 tons of PCB<sub>s</sub> had been produced in China from 1964-1974. Most of it was used as the soaker for electric power capacitors, while a small amount as the additive for paint. The production of PCB<sub>s</sub> and its open use has been prohibited by Chinese government. The criteria for PCB<sub>s</sub> in environmental have been made by Environmental Protection Agency of China. Two Chinese commercial PCB<sub>s</sub> containing 41% and 51% of chlorine (respectively) have been used as the references for individual GC peak quantification. PCB<sub>s</sub> in the soil, air, water, etc, has been determined by GC/ECD and GC/MS. We found that environmental contamination of PCB<sub>s</sub> had happened only in transformer substation before 1984. Since 1985 a great number of the capacitors have been discharged from the electric network. These abandoned capacitors have been discharged from the electric network. These abandoned capacitors have caused PCB<sub>s</sub> pollution in soil and sewage of some areas. Nowadays, the government has enacted strict regulations to ensure that the wastes containing PCB<sub>s</sub> be buried or incinerated in order to prevent pollution.

China started its research on dioxins in 1985. The PCDD/PCDF<sub>s</sub> have been found in china-made technical products (PCB<sub>s</sub>, PCP and Na-PCP) and waste from thermal decomposition of BHC<sub>s</sub>. China produces 5000 tons of PCP and about 6000 tons of Na-PCP annually. The standard of 2,3,7,8-TCDD has been synthesized. Methods such as MS/MS, HRGC/MS and HRGC/HRMS have been established to determine PCDD/PCDF<sub>s</sub>. The EPA has gained support in dioxin research.

Na-PCP is still used as the main molluscicide in China. The middle and lower valleys of the Yangtze River are main areas for Schistomoiasis. The dioxin risk for 6000 tons of Na-PCP as molluscicide to be used annually in densely populated farm lands is being assessed.

As in a developing country our experimental conditions are still very poor. We hope for assistance from advanced laboratories and co-operation in doing research.

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