Base Catalysed Dechlorination

Base Catalysed Dechlorination (The BCD Process) can involve direct dehalogenation or decomposition of the Waste material, or can be linked with a pre-treatment step such as thermal desorption which yields a relatively small quantity of a condensed volatile phase for separate treatment by the BCD process.

The BCD process involves the addition of a caustic solution to the contaminated medium containing one or more halogenated or non-halogenated organic contaminant compounds. A proprietary catalyst compound is also required.

The mixture is heated at a temperature suitable for the reaction to take place.

The BCD process is able to reduce PCB from a maximum 10000 mg/kg to below detectable limits. The process must be monitored to ensure that the reaction continues to completion.

Given that the process is a batch operation, it is possible to allow the reaction to proceed until the required level of destruction has been confirmed; typically batches are treated to less than 2 ppm as per Australian requirements.