

1991 Landmark Report

In 1991, the US EPA produced a landmark report for the State Pollution Control Commission. The Wicklund and Rubinstein Report changed thinking and initiated a new period of inquiry about the risks of pollution in Homebush Bay.

DIOXIN CONTAMINATION OF SEDIMENT AND MARINE FAUNA IN HOMEBUSH BAY

A Report by

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SYNOPSIS

Chemicals were manufactured at the Union Carbide Australia Limited (UCAL) site for almost 60 years, beginning with the original owners, Timbrol Limited, who made wood preservatives.

The site is on Homebush Bay and was expanded by reclamation of the bay at various times between 1937 and 1974. The fill consisted of a variety of materials, including by-products from the various chemical operations.

A wide range of products was manufactured at the site. Among these were chlorinated benzenes and phenols, the herbicides 2,4-D and 2,4,5-T, coal tar products and organochlorine pesticides.

A significant unwanted by-product of the plant was 2,3,7,8-tetrachlorodibenzo-p-dioxin (popularly known as "dioxin" or TCDD). The US Environmental Protection Agency's Carcinogen Assessment Group has determined that, based on demonstrated effects in animals, 2,3,7,8-TCDD is a probable human carcinogen and among the most potent animal carcinogens evaluated by the Agency to date.

Remediation of the site began in 1986 but was later halted subject to an order from the State Pollution Control Commission (SPCC). The entire decontamination process was evaluated and allowed to proceed with SPCC supervision.

It was reasonable to assume that Homebush Bay was also contaminated with the same materials found on the UCAL site. Subsequent sampling and analysis of the sediment and biota of the bay has shown widespread contamination at high levels. Remediation of the bay to prevent further movement of pollutants to the Parramatta River and continued contamination of marine life is imperative.

The consultants were asked to comment on various subjects that will determine what further action is needed in the area. This included determining levels of contamination in sediment that could be used to predict contaminant levels in fish. This report also contains comment on suitable remediation of this situation.

The consultants acknowledge the cooperation and expert guidance provided by the staff of the SPCC, particularly Dr Warwick Forrest, Mr John Court and Ms Cathy Dyer.