

This week

Dioxin in the Great Lakes

The recent discovery of the most toxic of the dioxin compounds—2, 3, 7, 8-tetrachlorodibenzo-p-dioxin (TCDD)—in several parts of the Great Lakes has created a stir of activity on both sides of the border between the US and Canada. At a recent meeting in Washington DC, dozens of scientists and officials from both countries agreed to mount a joint research effort to measure the extent of the dioxin pollutant in and around the Great Lakes.

The culpability of chemical manufacturers in the US and the options for recovering damages from polluting companies have been the subject of lively debate in Canada's parliament. Significant traces of TCDD were found in Saginaw Bay, Michigan, and in Lake Ontario. Dow Chemical is the only manufacturer of dioxin compounds in the Great Lake basin, and operates a plant at Midland, Michigan, on the Saginaw River. Hooker Chemical also manufactured dioxins in the basin until the mid-

1970s at a plant near Niagara Falls, New York State. That plant has since ceased operating.

Canadian officials said at the meeting that the government's Department of Justice is looking into common law to determine whether Canadian citizens or interest groups would have standing to sue American companies in the US courts for damages suffered because of TCDD pollution. Environment Canada, the government's environmental bureau, has asked the US to investigate past and present manufacturing activities that could have contributed to dioxin pollution.

Authorities in the US already have turned up several sites near the Niagara River where TCDD and 2, 4, 5-trichlorophenoxyacetic acid (2,4,5-T) have been dumped. TCDD occurs only as a by-product of the manufacture of 2,4,5-T, which was used in pesticides but is now banned for that purpose.

Canadian scientists discovered TCDD in herring gulls' eggs from 12 colonies of birds throughout the Great Lakes. Trace levels of about 10 parts per trillion (ppt) were evident at several colonies, but "hot spots" at Saginaw Bay in Lake Huron produced eggs with up to 90 ppt, and in Lake Ontario with up to 64 ppt. Most startling, said a scientist with Environment Canada, were levels found in eggs that had been refrigerated in 1971 and just now analysed. These showed levels of 800 ppt.

Douglas Hallett, of the Canadian Wildlife Service, performed the survey of herring gulls' eggs, and concluded in a paper to the government that waste disposal or "catastrophic accidents" during 2,4,5-T manufacture by Hooker Chemical at Niagara Falls is the most likely source of Lake Ontario's dioxins. He also noted that TCDD levels in these eggs have dropped dramatically since the Hooker plant shut down. □