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PCB taint found in mussels put in Bay, Providence R.

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PROVIDENCE — "Significant" levels of PCBs, chemicals strongly suspected of causing human cancer, have been found in test mussels placed in the Providence River and Narragansett Bay.

PCBs, or polychlorinated biphenyls, have been used widely as industrial coolants and lubricants because of their high resistance to heat and decay. But even in small amounts they are considered a health hazard to humans, and their manufacture has been banned in this country for the last two years.

None of the levels found in the Narragansett Bay test mussels exceeded the Food and Drug Administration's existing or proposed legal limits for fish or shellfish.

But the Environmental Protection Agency's Environmental Research Laboratory in Narragansett regards the results of its new PCB testing program last summer as "significant" because:

- Levels at five test stations were three to seven times higher than in control mussels from the relatively clean waters of Little Compton and Block Island, as well as 34 other spots along the Atlantic, Gulf and Pacific coasts where samples were first taken in 1976.
- The highest levels were in the Providence River, already polluted by wastes discharged into that stream and the tributary Pawtuxet River. The lowest levels were in the bay's West Passage off the EPA laboratory.
- PCBs were found in the sludge of 17 of 38 municipal and industrial wastewater treatment plants sampled as part of the Statewide Planning Program's comprehensive 208 Water Pollution Study in 1977.
- The continued presence of PCBs in state waters, despite a 1977 EPA ban on further manufacturing and the absence of any known sources in the state, raises the possibility that some products still are being dumped illegally.
- There is continued uncertainty over what levels of PCBs can be considered safe in food. The FDA considered cutting the legal limit from 5 to 1 part per million (ppm). Then it proposed a new limit of 2 ppm to ease the economic impact, but postponed implementing the reduced limit because of industry objections.

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DR. DONALD K. PHELPS, acting director of the EPA laboratory in Narragansett, said the findings make clear that more study is needed to determine the origins and effects of PCBs.

Phelps also suggested that a report issued last year by the University of Rhode Island Coastal Resources Center "may be misleading" in stating that PCBs "are not a major pollution problem" in the state.

"It depends how you define the problem. There would be no problem anywhere under FDA's 5 ppm limit, but San Pedro, Calif., would exceed the proposed 2 ppm limit, and many places might well exceed lower limits," Phelps said. Such places probably would include the New Bedford area and the Hudson River in New York, where bans have been imposed on catching certain kinds of fish because of heavy PCB contamination in the past.

PCBs threaten consumers of other

In 1968, four persons died and 1,200 were officially declared to have been sickened by eating rice oil contaminated by PCBs in Japan. Some observers said the actual total of those made ill may have been as high as 15,000. The PCB symptoms included acne and skin eruptions, darkening of the skin, nails and mucous membranes of the eyes and mouth, chemo-like discharges from the eyes, loss of hair, loss of libido, fatigue, numbness, dizziness, forgetfulness, stomachache, headache, nausea, menstrual disturbances, bone and joint deformities and poor development of teeth in children.

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LAST JUNE, leaking PCBs at a Billings, Mont., processing plant contaminated stocks of chicken feed, leading to the destruction of thousands of chickens and more than a million eggs in seven Mountain and Western states.

The Monsanto Co. introduced PCBs in 1930 with little testing, if any. By the time EPA banned further manufacturing in 1977, Monsanto had produced 1.4 billion pounds in Alabama and Illinois. Imported three million pounds for sale and exported 150 million pounds.

Of this output, 750 million pounds are believed to remain in use, chiefly in electrical transformers, but also in hydraulic fluids, plasticizers, laminates of ceramics and metals, brake linings, clutch faces, grinding wheels, washable wall coverings and upholstering materials, adhesives for envelopes and tapes, coatings for ironing board covers, delustering rayon, flame-proofing synthetic yarns, waterproofing canvas, paints, varnishes and lacquers, film casting solutions, insulating materials, plastic bottles, epoxy resins for coating metals, and sealants such as putty. PCBs are also used in the making of carbonless copy paper, to coat paper used in thermoduplicating machines and as an additive in the xerographic transfer process.

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ENVIRONMENTAL CONCERN first arose when PCBs were found in birds in Sweden in 1966, and public health concern after Japan's rice-oil incident in 1968, according to the private Environmental Defense Fund, which has been urging strict low limits in this country.

The Food and Drug Administration responded in 1973, setting the first PCB limits at the extremely low levels of 5 ppm in poultry, fish and shellfish, 2.5 ppm in milk and dairy products and .5 ppm in eggs. Last Aug. 28, FDA cut these limits to 3 ppm in poultry, 2 ppm in fish and shellfish, 1.5 ppm in milk and dairy products and .3 ppm in eggs.

All these new limits are now in effect, except the one for fish and shellfish. The fish-shellfish limit remains at 5 ppm, pending resolution of objections raised by the National Fisheries Institute, an organization of seafood processors, that the lower level would have a bad economic impact.

EPA, meanwhile had launched "Mussel Watch" in 1976 to monitor water pollution along the Atlantic, Gulf and Pacific coasts.

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