

A CANADIAN BREAKTHROUGH

sensitive than hitherto. They permitted, for the first time, detection of toxins in parts per trillion.

The presence of even trace levels of these unwanted substances was unacceptable to the industry. **Paprican initiated a comprehensive research program** to learn more about the sources and method of formation of the dioxins and furans and to find how they might be eliminated from pulp manufacturing processes.

Breakthrough....!

Paprican's scientists quickly found some clues: among them, the range of dioxin levels from one mill to

another, and the absence of detectable traces at some. The research showed that at some mills contaminants were present in the wood chip supply, in defoamers, and in other washing additives used in the pulp mill which could act as precursors to the formation of dioxins and furans. Steps were recommended to minimize these contaminants. On further investigation, it was also found that the dioxin-free mills used low quantities of chlorine bleach. **In other words, the production of dioxins and furans was NOT an inevitable result of bleaching pulp. Rather, it was the result of chlorination of undesirable contaminants present in varying amounts at some pulp mills when high levels of chlorine**

were used. As more pieces of the dioxin puzzle fell into place, **Paprican** was able to prescribe a series of strategies that would allow the mills to take steps to control their raw material supplies and to operate in such a way as to eliminate the problem.

A \$1.5 Billion commitment

To date, Canadian pulp companies have committed some \$ 1.5 billion for extensive process modifications and effluent treatment to reduce the formation of these unwanted by-products of the bleaching process. More commitments

will be forthcoming as companies complete their plans to carry out **Paprican's** recommendations.

Ongoing research

Other research programs are in progress to gain further insights into the potential interactions between the industry's operations and the environment. Pulp and paper companies are resolved to continue making safe, quality products for Canadians and others the world over while protecting the environment.

FOR MORE INFORMATION:
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The quest for high-value products, for improved competitiveness, and for environmentally-friendly processes is finding expression in the selection of Paprican by the Canadian government as the leader of one of the 14 newly-established networks of excellence.

Paprican will bring together scientists and engineers from Canadian universities to develop further the mechanical pulping process to produce superior grades of printing and writing papers while working toward greater harmony with the environment.

This important initiative reflects the industry's resolve to achieve a balance between business opportunities and environmental responsibilities.



The Pulp and Paper Industry of Canada
Committed to renewal