MAKING PULP AND PAPER WITHOUT HARMING RECEIVING WATERS

Ecotoxicology Expertise

INFO
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Helping to meet sustainability targets

Regulatory toxicity. Environmental effects monitoring (EEM). Fish reproduction and endocrine disruption. These are some effluent-related issues facing today's mills. They require expertise in toxicology and impact assessment, often referred to as ecotoxicology — the kind of expertise offered by the Environment Program at FPInnovations. The expertise helps Member Company mills meet their sustainability goals of regulatory compliance and continuous environmental improvement.

Since 1973, we have developed this core competency to:

- Provide information about the relationship between mill operating conditions and effluent quality.
- Appraise the numerous toxicity and impact assessment methodologies with respect to their accuracy and relevance.
- Offer a resource centre for a broad range of effluent-related issues, including a troubleshooting service for mills faced with specific effluent problems, such as regulatory toxicity.

In the past, our efforts have benefited mills with decisions about environmental strategies and their consequences. For example, we found no relationship between effluent AOX levels and toxicity. This information helped the industry chose between various bleaching options, particularly between ECF and TCF bleaching. It also contributed to the decision of the federal government to not regulate AOX. As another example, our monitoring studies in the field showed that the billions of dollars spent in the 1990s to upgrade mills resulted in demonstrable improvements in receiving waters, indicating that industry investments were paying off.

What about today?
Despite best efforts, effluents from some mills occasionally exceed regulatory toxicity limits. For these mills, we have streamlined a toxicity identification evaluation (TIE) procedure that can successfully identify the cause and thus facilitate a quick return to compliance.

> "FPInnovations' contribution has been invaluable to my mill for solving toxicity problems."
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> *Siew Sim, Environment Technologist, Howe Sound Pulp and Paper Ltd.*

Another major concern relates to the possibility that mill effluents affect the reproductive capacity of fish through disruption of the endocrine system. This is a complex issue that requires extensive research effort and expertise. FPInnovations is working with scientists from both government and academia to help resolve the concerns and provide directions for mitigating solutions, if needed.

What about tomorrow?
Predicting future issues with certainty is not possible. However, the existence of toxicity and impact assessment expertise at FPInnovations will provide mills with the flexibility to tackle emerging issues in a proactive manner as well as give continuous support for the industry's sustainability goals.

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