

## Consistent Regulatory Acceptance for Chemicals Relating to Soil and Water Treatment

There are regulations and other mechanisms in place to approve the chemicals used to treat water or soil impacted by construction and other heavy industries (mining, land development, etc.) The current process to approve these technologies and products require manufacturers to provide a Material Safety Data Sheet (MSDS) and in some cases a Toxicology report. However, these documents do not include minimum and maximum threshold allowances for the chemicals used in water or soil treatment, which leads to a broad acceptance of products that may pose a significant risk to the environment.<sup>1</sup> As a result, regulatory staff at various levels of government has limited guidance, enforcement and decision making tools available to them when assessing new or existing treatment methods.

In many cases, newer technologies can potentially be safer to the environment and more cost-effective than existing technologies due to increased quality of water and increased efficiencies, reduction in post application costs, reduced maintenance costs, less monitoring requirements, simpler and more passive operations and reduced labor costs. Yet many new technologies and products for soil or water treatment can not find their way easily to market because the regulatory process treats them differently from established water and soil treatments.

End users typically request approvals letters from regulators before they will purchase a new product, regardless of potential cost savings or improvement in environmental performance. Regulators such as Environment Canada often state they are unable to provide such approval. Due to the practice of 'grandfathering' in existing water and soil treatment products, established suppliers are not required to provide similar types of letters of approval for existing products. In some cases, existing suppliers are able to avoid having to provide toxicity reports but can use utilize MSDS sheets in their place. This gives existing technologies a definite advantage over any newer, better, more environmentally preferable technologies.<sup>2</sup>

The cost to bring a new technology or product to market is prohibitive enough without having to overcome regulatory red tape that should be supporting more environmentally friendly solutions instead of barring them.

### Recommendations

That the federal government:

1. Work with the provincial & territorial governments to develop consistent requirements across Canada and its individual provinces/territories for the chemicals used for water and soil treatment in open environments.
2. Ensure that regulations for treatment of water and soil apply equally to new and existing products, processes or technologies.
3. To ensure that a product or technology is verifiably safe to the environment, require that toxicological data has been provided following accepted standards and practices as opposed to relying solely on MSDS information.
4. Ensure that the regulations are realistic and have a measurable impact on the environment.
5. Implement a harmonized product review standard between the various regulators, municipal, provincial/territorial and federal governments that allows a clear and consistent standard that all product, technology suppliers, manufacturers and or companies must adhere to and or meet. If a product or technology meets acceptable criteria as defined by the product review standard, then the product would become a recognized technology within the various Canadian jurisdictions.

<sup>1</sup> Canadian Journal of Fisheries and Aquatic Sciences, 1985. Fish Gill Structural Changes Induced by Toxicants and Other Irritants: A Statistical Review. Retrieved June 23, 2014 from <http://www.nrcresearchpress.com/doi/abs/10.1139/f85-083>.

<sup>2</sup> Environmental Toxicology and Chemistry, Vol. 33, No. 7, pp.1552-1562, 2014 #2014 SETAC Effects of anionic polyacrylamide products on gill histopathology in juvenile rainbow trout (*Oncorhynchus mykiss*).