



DIOXIN/FURAN TESTING

CASE STUDY: MAINE DEP

Maine DEP completes massive dioxin monitoring project with Pace® Analytical—on-time and on budget.

Environmental Projects | Food and Animal Feed Testing | ISO 17025 Certified | Human Fluid Testing
Brominated Flame Retardants



HISTORY

When early settlers first came to North America, it was a wild and pristine environment untouched by modern man. As the population grew and the heavily forested area that is now the state of Maine was settled, man began to encroach upon these idyllic surroundings. In the late 1800's the industrial revolution brought the Paper Industry to Maine, building large mills to process the native timber, producing an array of paper products, and providing jobs for the local population. In the fever of development, the long-term environmental impact of these massive facilities was overlooked, including the chemical bleaching process that was unknowingly contaminating Maine's rivers, streams and aquatic ecosystem with dioxin – and other toxic compounds. In the early 1980's environmental scientists began to uncover the insidious toxic effects of dioxin on animals, humans and the ecosystem. Once the link with paper bleaching was established, paper-producing states like Maine began to realize the scope of their problems.

CHALLENGE

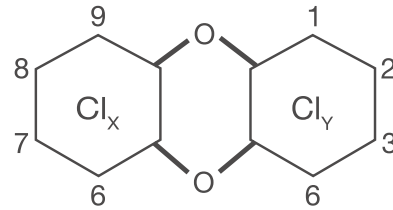
Many present day residents of Maine would like to see their state returned to something close to that pristine condition of long ago—a time when all the waters were safe for drinking or swimming, and the fish could be caught and eaten without concern. To achieve these objectives, the state has enacted stringent effluent laws on dioxin and other targeted contaminants and initiated efforts to cleanup existing contamination to safe levels. Maine's Department of Environmental Protection (DEP) is charged with the daunting tasks of regulating local industry to minimize ongoing environmental impact, and monitoring the positive effects, of proactive efforts to return the Maine environment to its earlier pristine condition. To accomplish these goals a complex monitoring plan was designed to begin capturing existing contaminant levels in various impacted waterways and local fish populations. Various media were incorporated to evaluate contaminant levels above and below point sources and to identify the best available technologies for ongoing monitoring efforts.

SOLUTION

In preparing to initiate the annual monitoring, Maine DEP was challenged to find a laboratory that could test for exotic contaminants like dioxin/furan, PCB Congeners, and multiple pesticides at ultra low detection limits. The chosen laboratory must also have the capacity to analyze 400-500 samples each year and have the expertise to handle a broad range of matrices including: water, sediments, fish tissue, caged mussels, and semi-permeable membrane devices (SPMD). In 2003 Pace® Analytical of Minneapolis, Minnesota, took on the laboratory support of this massive project and was able to supply Maine DEP with unprecedented service levels on all aspects of the project.

BENEFIT

Using Pace® Analytical as a single source laboratory to handle their analytical needs enabled Maine DEP to manage the logistics of a large, highly complex project, insuring 98%+ on-time results, while attaining stringent project data quality objectives on all samples. The Pace® laboratory delivered the data in hardcopy and in a customized, user-friendly electronic format, enabling integration with the existing database. More importantly, the project was able to stay within state mandated budget constraints. Maine DEP Project Supervisor, Barry Mower, points out that "choosing Pace® Analytical offered us a good value, and given the size and scope of the project, the laboratory's flexibility and can-do attitude resulted in a good relationship, and superior on-time performance throughout the project."



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