

BCIP Biperliminate™

Bi Pure Water completed a two trailer packaged water treatment system for the BC Government at Rodgers Pass. There was significant soil contamination due to the construction of the railway in late 1800s, the Trans-Canada Highway in the late 1960s and the subsequent operation of a service station until 2009.



Figure 1: Exterior after installation



Figure 2: Interior of completed system

Key Features:

Water Source: Groundwater well

Peak Flow Rate: 45 L/min

Treatment:

1. 20 micron cartridge filter
2. 0.35 micron carbon filter
3. Biperliminate™ process

Dimensions: 20 Ft x 8 Ft x 7 Ft

Partners

Following a thorough screening by the Federal government of the technology and cost justification, Bi Pure Water was awarded a contract to treat the groundwater at Rogers Pass in Glacier National Park.

Objective

The water at the site is difficult to treat using standard water treatment methods. Toxins present are PAHs, BTEX, metals, and petroleum hydrocarbons. The treatment is Biperliminate™, Bi Pure Water's Advanced Oxidation Process.

About the Systems

Designed and manufactured in Surrey, BC by Bi Pure Water Canada Inc., the BCIP system was factory fabricated as two modular trailer units. These units could be transported to site by pickup truck. The first trailer consists of the treatment system and the second is an influent tank which retrieves and stores water from a groundwater well, ready for treatment.

The Technology

Inside the treatment trailer is a small pump, a 20 micron cartridge filter for filtering large particles, an oxidant injection system, a static mixer, and electrical columns. A 0.35-micron filter and a granular activated carbon filter follows the electrical system purely to capture finer metals such as zinc in order to meet freshwater aquatic standards. While the Advanced Oxidation Process is designed for organics and not usually metals, subsequent testing has shown 80-90% precipitation of soluble metals occurs during the Bipurelimate™ process. The precipitates could be captured by a 1 micron filter, or 0.02 for zinc. This has great potential for the removal of high solubility, lower oxidative state toxic metals such as Lead, Chromium, Copper, Arsenic, and Cadmium from varied wastewaters.

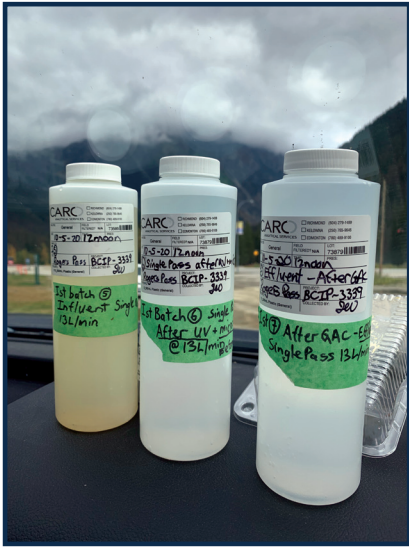


Figure 3: Treatment results before and after

Bipurelimate™

Bipurelimate™ readily destroys a very wide range of toxins using a proprietary oxidant mixture and an electrical system. The process is selective for most toxic compounds, i.e. those with the most effect on human health, i.e. those that are partially soluble, particularly toxic and/or of high molecular weight. The selectivity of the process allows it to cost-effectively treat highly concentrated wastes for which other non-selective processes would be prohibitively expensive.

Bipurelimate™ will rapidly and effectively destroy the widest range of target refractory toxins as compared to competing methods, yet at a much lower cost.

Bipurelimate™ systems occupy a footprint at least **50 TIMES SMALLER** than biological systems.

Also, it is at least **10 TIMES LESS EXPENSIVE** in CAPEX than 2^o treatment and is much safer, more environmentally friendly and is a low-cost technology.

Bipurelimate™ destroys the toxins while Activated Carbon only **RELOCATES** them, usually to landfills where they re-enter the environment when the landfill is rained on.

Our package water treatment plants are cost-effective because:

- The water treatment plants are custom engineered to a specific water analysis and budget.
- The plant can be built in the Port Kells factory where the trained staff works.
- The completed water treatment plant is quality, leak- and flow- tested at the factory.

For more information visit
BiPureWater.com



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