

UV Water Treatment
Hydro-Optic™ Technology

Canadian Salmon Farm Installs Hydro-Optic™ UV for *Aeromonas Salmonicida* and *Renibacterium Salmoninarum* Inactivation

A Canadian salmon farm installed Atlantium Technologies' Hydro-Optic™ (HOD) UV in September 2013 as the primary disinfection technology against *Aeromonas Salmonicida* and *Renibacterium Salmoninarum*. With proven performance in delivering unparalleled water biosecurity in the aquaculture market and the ability to address 4-log inactivation of pathogens, the medium-pressure HOD UV provided the facility a proven solution for the protection against Bacterial Kidney Disease (BKD).



Prior to the installation of the HOD UV system (Model RZ300-14), the salmon farm operated an open-channel UV system which failed to provide the site with the required biosecurity and was plagued with cumbersome maintenance requirements. The HOD UV technology treats a flow rate of 1,140 m³/hr and was designed to automatically respond to seasonal changes of the water UV transmittance (UVT). UVT is an indicator of water quality and designates the percentage of UV light that passes through the water. The HOD UV system offered the facility a proven disinfection technology with minimal power consumption, low maintenance and a compact footprint through the plug-and-play design.

Biosecurity Design Parameters

Atlantium's unique disinfection solution relies on five key design parameters which, combined, ensure water biosecurity:

1. Third-party system validation according to EPA protocol.
2. System sizing according to the Reduced Equivalent Dose [RED] and not the average UV dose used by most UV providers.
3. A tailored suite of UV dose-design for combating aquaculture-related pathogens, according to Atlantium's proprietary log-reduction database.
4. Robust medium-pressure UV lamps, twice as powerful and more effective than conventional low-pressure UV lamps used by most UV providers.
5. A dedicated UV sensor for each UV lamp to ensure operational transparency and provide the user with complete real-time information.